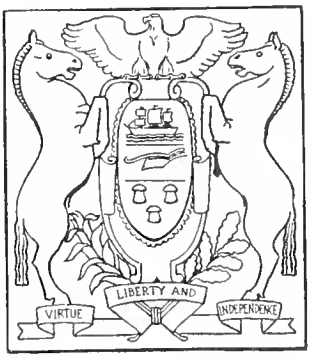
PENNSYLVANIA CURRICULUM STUDIES

GEOGRAPHIC EDUCATION IN ELEMENTARY AND JUNIOR HIGH SCHOOLS



SUGGESTIONS FOR DEVELOPING COURSES OF STUDY IN GEOGRAPHY

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Geographic Education

GEOGRAPHY is defined in the suggestions offered in this bulletin as a study of the interrelationships between man and his natural environment. It attempts to explain how man has adjusted himself to different types of natural environments in all parts of the world. It considers in what ways and to what extent he has developed his own possibilities in connection with natural resources. It treats of the way in which the natural resources have been modified to suit the needs of man. It explains how interrelationships between peoples or regions are in turn related to the elements of the natural environment. It also recognizes the cultural stage which a people has reached in spite of environmental conditions.

The change in emphasis of geographic education from the memorization of facts to an understanding of man's activities in relation to place has developed with increasing knowledge of our country and the world, with increasing international relationships through commerce, and with changing educational philosophy and methodology adequate to meet the demands of modern civilization. The presentation of geography according to these generalizations will lead the child to realize that, to a great extent, what man does is limited and influenced by what he has to do with, by the stimulating or depressing climate in which he lives, and by the relative ease or difficulty of contact with others. He will sense the interdependence of his own community with other communities, of his part with other parts of the country, and of his country with other countries.

There are numerous ways to work for better world relations. They all need to start from a basis of knowledge—knowledge of other countries and of other peoples, and of the conditions and problems that make them as they are. This is the great opportunity of the geography teacher—to so lead children in their "experiencing" of geography that comprehensions will emerge that make for attitudes of increased respect, sympathy, and understanding of other peoples.

It is not intended that the material in this bulletin shall constitute the course of study in any school or school district. The material is intended primarily to aid teachers in developing their courses of study. It is hoped that teachers, administrators, and others working with these suggestions will transmit to the Department of Public Instruction outlines and units developed along the lines herein suggested. These will be used as a basis for making further suggestions to the teachers of the Commonwealth.

LESTER K. ADE
Superintendent of Public Instruction

June 1, 1935

Acknowledgments

These suggestions for developing a course of study in geography follow the general outline prepared by the geography committee and issued in mimeographed form under date of June 1, 1932. The members of the committee are as follows: Doctor H. Harrison Russell, State Teachers College, Bloomsburg, Chairman; Harriet Elliott, State Teachers College, West Chester; Josephine Grainger, Director of Elementary Education, Allentown; Erna Grassmuck, State Teachers College, Indiana; Clara Shryock, Assistant Superintendent, Cambria County Schools; Zoe Thralls, Assistant Professor of Geography, University of Pittsburgh. The Department of Public Instruction representatives consist of William H. Bristow, Director, Bureau of School Curriculum, and Helen Purcell*, Chief of Kindergarten and Elementary Education. The suggestions outlined in this material are a part of a general program organized under the direction of William H. Bristow.

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* Deceased July 1, 1934.

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Geographic Education in the Elementary and Secondary Schools

GEOGRAPHY is a study of the interrelationships between man and the natural environment organized on the basis of regions. Such relationships include: (1) how man has adjusted himself to different types of natural environment over the world; (2) how and to what extent he has developed his possibilities; (3) how he has modified the natural resources found in these regions; (4) how interrelations between peoples or regions are in turn related to the elements of the natural environment. At different stages in his cultural development man makes different uses of his natural environment; therefore, the cultural stage of a people should also be recognized.

In developing any geographic understanding, three elements must be taken into consideration: (1) a human item-feature, activity, or condition; (2) some natural item or items to which the human item is related; (3) the type of the relationship between the human feature, activity, or condition and the related natural item or items. The study of either a natural item, such as relief or climate, or the study of any cultural item, as a city or an industry, exclusively as an end in itself is thus eliminated. These human and natural facts are used to help explain how man behaves and feels in a given region. Every natural item should be treated so as to show its significance in helping to explain human features, activities, or conditions.

Each geographic region has a distinct individuality or character that may be called a "geographic personality." Just as a human individual has physical and spiritual characteristics that distinguish him from other individuals, so a geographic region has natural environmental conditions and human adjustments or responses to these conditions that give it a "personality." Geographic traits are dominant aspects of the interrelations between major items of the cultural layout and of the natural layout or landscape. A geographic personality of any given region might be defined as the sum total of these geographic traits which distinguish that region from other regions.

Objectives in Geographical Education*

A major objective of geographic instruction is to develop a knowledge and an appreciation of the interrelation between man and his natural environment.

The concomitant objectives are:

Concepts of geographic relationships and of associated cultural and natural items for the understanding of the characteristic adjustments man has made or is attempting to make to the natural environment in the major regions of the world

A knowledge of the sources and tools from which geographic information may be secured

* For detailed discussion of objectives, techniques, and achievements, consult the National Society for the Study of Education Thirty-second Yearbook, "The Teaching of Geography." Public School Publishing Company, Bloomington, Illinois. 1933.

The ability to secure geographic information through the interpretation of pictures, maps, globes, words, specimens, graphs, and statistical tables

A knowledge of the locations of areas—land and water, small and large—which are significant in the development of geographic relationships

Outcomes in Geographic Education

Through the accomplishment of this major objective and the concomitant objectives, the following outcomes should be expected:

A knowledge of such geographic relationships and of associated concepts of cultural and natural items as will enable the individual to give more intelligent consideration to current problems —individual, state, national, and international

An understanding of and a sympathetic interest in the problems and achievements of peoples in natural environment different from one's own

A realization that the economic and cultural interdependence of regions and peoples is due largely to difference in natural environmental conditions

A better understanding of the value of natural resources and how man may make more intelligent use of them

The ability to make a worthwhile use of leisure time through the vitalization of travel and reading because of a fuller understanding of the interrelations between man's work and play and his specific natural environment

Outcomes in geographic education include not merely acquisitions of geographic information but also skills and habits, attitudes and appreciations. Specific achievements for each grade are indicated in this course. These powers and attitudes are accumulative as the pupil progresses from grade to grade. Many of these characteristics become habits of working and feeling. For example, after the first half of the fifth year, a pupil should turn immediately to physical-political and precipitation maps of North America, or of the United States and Canada, in building geographic relationships concerning the agricultural activities in the Great Lakes—St. Lawrence Region. Again, by the time a pupil has studied China in the seventh year, he should have developed an understanding attitude towards people who have a less complicated stage of culture than commonly exists in the United States. He should not feel that the Chinese are an inferior people.

Geographical Equipment

A wide variety of pertinent tools, well organized and readily accessible, is necessary for effective geographic learning. This equipment must be kept up-to-date and suited to the comprehension level of a given class. These tools may be produced by commercial or other agencies or may be made by individual pupils, groups of pupils, or by the teacher. They should conform to the widely accepted standards for the respective tools. Standards of a good map include a meaningful title, a scale, a grid (at least two parallels and two meridians indicated

preferably at the margin of the map), a key or legend, source of information or reference, date where advisable, recognized symbols for international, state, or province boundaries, coast lines, and other natural features continued beyond the political boundaries of a country to avoid giving the impression that this land mass is an island. The first map needed in every school is a physical-political map of the world—but not a mercator projection.

A graph should have a meaningful title, a legend or key, a scale, source of information or reference, and a date where advisable.

Adaptation of Textbook to Course of Study

Where the material in any given textbook does not parallel the sequence of units in this course, an excellent opportunity is presented for teaching the pupil to use effectively the table of contents and the index of a textbook. Moreover, the pupil is faced with a true life situation when he finds it necessary to use material other than that found in the textbook in achieving the goals set up for one or more units.

Study and Test Situations

Aids in studying geography should include not only various textbooks but reference publications, pictures, specimens, globes, graphs, charts, and statistical tables. Each pupil should develop certain skills in reading, interpreting, evaluating, and organizing geographical materials.

Pictures are one of the most satisfactory means of securing geographic information. However, care must be taken in selecting the right type of picture. A picture of high geographic quality is one in which a human item-feature, activity, or condition is shown in its natural setting so that the child can see how the factors of the natural environment are related to the human item. An illustration is a terraced hillside that is being used for rice culture.

A picture of lower quality is one in which only the natural factors essential in a geographical learning are shown; for example, the section of a dissected plateau displaying an outcrop of coal. In this case, the child must be stimulated by another picture showing related cultural items in the same landscape; for example, miners at work. This procedure with two pictures applies as well to the study of one picture in which both human and natural items are shown. In some cases such a picture may not be available. In the use of pictures, the skillful teacher will employ definite questions to direct the child's attention to significant human or natural items so that he may secure the information from the picture. The child should be trained to look for specific things in the pictures, to set up possible relationships, and then to check them by consulting other tools, such as maps, words, and statistics in one or more sources.

The ability to read and interpret maps is a power that develops slowly and the teacher must train the child step by step. The first map should be simple and the child should learn to recognize the symbols as they are needed in each unit. By the time the fourth year is completed, the child should be able to recognize the common map

symbols, such as those for river, coastline, mountain, plain, city, railroad, and other frequently used natural and cultural items.

Ability in the use of other tools, such as words, specimens, graphs, and statistical tables should be developed also, step by step. Ample opportunity should be afforded each pupil to express his ideas as well as to obtain ideas by means of sketches, maps, graphs, charts, posters, booklets, and similar representations.

The variety of tools for testing achievements in geographic education should be definitely related to the variety and quality of tools used in the study situation. Certain achievements should be tested by means of pictures, others by means of maps, still others by means of graphs. Words should never be the exclusive medium for testing geographic understandings or appreciations.

Since power in organizing data of geographic quality is an essential achievement, measurement of such power becomes an essential phase of the testing procedure. Completion, multiple choice, and matching type are not the only test forms that should be used. Power to organize in outline form geographic data, namely, significant elements in the natural and related cultural landscapes or environments of a given region or regions, should be tested.

Gradations in Learning*

The new geographic education is concerned not merely with what to teach and how to teach geographic understandings of approved value but also at which level of learning to teach a given unit. In the third year, the pupil begins to sense, through observations of concrete phenomena or specimens, items in his immediate natural and cultural environment. He acquires a beginning realization of some of the adjustments made by people in his home community to elements of weather and climate. He learns that his community is somewhat dependent on other regions having natural environments different from his own.

In grading geographic materials, three criteria should be considered: (1) the degree of complexity of the geographic relationship involved or of the region being studied; (2) the concreteness with which the ideas involved in the relationships may be presented; (3) the functional value of the materials. Some relationships are much simpler than others because they show a direct relationship between a human item and the immediate natural environment. For instance, the activities of the Eskimos are very directly related to the immediate natural environment. This type of relationship may be termed a one-step relationship idea. The question of relative difficulty also requires that these relationships be based upon natural and cultural items which can be presented concretely. In selecting this first series of units, another point must be considered. A world concept should be delevoped very early because such a concept is fundamental to later geographic understandings. These basic considerations then imply first, that a series of units should be selected which show as far as possible simple one-step relationships; secondly, that this series of units should be selected as far as is practical from various parts

* National Society for the Study of Education Thirty-second Yearbook, "The Teaching of Geography," pp. 167-175; 212-218. Public School Publishing Company, Bloomington, Illinois, 1933.

of the world so as to develop this world concept. Units should be from both the northern and southern hemispheres so that the child will realize that as one moves poleward, either northward or southward from the equator, life changes as some of the items of the natural environment change according to location of the region in respect to sun position. A sufficient number of representative units should be selected from the low tropical latitudes, the middle latitudes, and from the high polar latitudes so that the children will understand that the temperature and other changes are gradual. These points have been kept in mind in selecting the units for the fourth year.

In selecting the units for the fifth year the same criteria have been applied. From the viewpoint of gradation in learning and the functional value in children's lives, the United States, Canada, and Newfoundland should be studied next. In endeavoring to arrange the subdivisions of these regions into units of relative difficulty, the complexity of relationships, the number of ideas, and the variety and complexity of each idea involved in a concept have been taken into account. In most parts of the United States or Canada, the acquisition of food, clothing, and shelter is comparatively complex, no longer being dependent upon the immediate environment; but the work activities of the people in many sections are still dependent upon the immediate natural environment. Furthermore, the distribution of population in certain regions is closely related to the conditions within the immediate natural environment. Therefore, in the sequence of units, first place is given to units in which the work activities of the people are most directly dependent upon the immediate natural environment, particularly as it applies in the United States. The simpler units precede the more complex units. Some items, such as climatic conditions are factors in the kind and amount of clothing worn in these sections. But the styles are selected at distant manufacturing centers, and the cost of the clothing is related to the distance involved and the transportation facilities. The transportation in turn is related to the characteristics of relief and other natural factors. Also in the fifth year an additional relationship is considered; namely, the relationship between distribution of population and the natural environment. This increases the complexity of the ideas involved.

The next level of difficulty begins in the latter part of the fifth year with the study of the northeastern section of the United States and continues into the sixth year. It is concerned with those regions where the work activities are more complex and where what the people do, and how they live depends to some degree upon natural and cultural factors outside their immediate natural environment. The activities of the people are related not only in part to the conditions in the natural environment, but also largely to the activities of people in surrounding regions. Thus, a third factor enters into an understanding of a region. Although many regions of the world come under this classification, especially the more developed regions, the problem of functioning value in determining the order of presentation must be kept in mind. Evidence seems to point to the fact that Europe should follow the study of the United States and Canada because Europe is our most important customer and also the one from whom we buy the

most. Furthermore, our cultural as well as economic relationships are strongly bound with those of Europe.

In the latter part of the sixth year and continuing into the seventh year, another level of difficulty with more complex relationships is encountered. The more abstract human characteristics and their relation to the natural environment are considered. This work involves the study of those regions where such abstractions as simple stages of culture, religious ideas, and historical influences affect the people to adjust themselves and to modify their natural environment.

China is an illustration. A real understanding of China is impossible or at least is incomplete, unless the effects of the simple rather than the complex stage of its culture and of Confucianism are recognized. These abstract cultural factors have qualified the ways in which the people have adjusted their lives to the conditions of the natural environment. The same is true of Japan, India, and other Asiatic countries. Latin America is another example. Here the types of work and recreation are colored by the habits and customs developed earlier in the European homelands of the Latin peoples. The political contacts with Spain and Portugal also have affected the adjustments which man has made to the natural environment. Therefore, Latin America should be one of the last regions to be studied. In the seventh year, a world view is completed and now the child should be able to think of the whole world in terms of population patterns, work patterns, political patterns, and the natural environmental facts which help to explain these patterns. The work from the fourth year through the seventh year seeks to develop the number of units necessary to give these understandings of this complete world concept, so that later the child can see the various countries in their world relationships.

With the completion of the seventh year the child has secured a world view of a comprehensive type. He is now ready to study a region or a nation placed in relation to the world natural environment. On a basis of functional value the specific region selected to be studied first in the world relation is naturally the homeland. In the fifth year the United States is studied from the viewpoint of man's distribution and his activities as these are related to the natural environmental conditions within the United States. In the eighth year, the pupil expands this understanding of the United States and develops a concept of our country in its world relations; that is, an understanding of the population pattern, the work pattern, and other phases of life in the United States as they are related to the natural environmental pattern of the world. Moreover, an understanding of the population and work patterns of Pennsylvania and of the child's local district in relation to the natural environmental pattern of the United States and the rest of the world is also essential.

In senior high school two geography courses are of functional value: (1) Fundamentals of Advanced Geography and (2) Economic Geography.

Recognition of Individual Differences

Since the experiences of children differ, the approach and treatment of various units of work should be modified to suit the needs of a given class or of given children, and of the conditions of the particular

environment of the school. Individual differences, therefore, may be met by organizing the work in such manner that each child will achieve a definite mastery level of information, skills, habits, attitudes, and appreciations and will experience the satisfaction of contributing specifically to the success of the geography work. Each pupil should be given opportunities for establishing goals, seeking and acquiring geographic relationships, evaluating his findings, and for having the class evaluate and analyze his findings.

Teacher's Preparation for Guiding the Children in the Development of Units

A type unit or part of unit is presented in considerable detail in each of the year's work as one way by which a unit may be developed. Approaches and activities will vary depending upon the interest of the children and the personality of the country. Just as a teacher, while studying the geography of a certain region, gradually acquires the comprehension of the geographic personality of that region by gaining understandings of specific interrelationships between the life of the people and the natural environment of the country, so the children, guided by the teacher, should gradually build up such a comprehension. The geographic understandings as listed in some of the units should be outcomes of the suggested activities. At no time should these bare statements be given to the pupils.

The teacher is ready to guide the children in their development of the unit when he himself (1) has acquired and listed the understandings of the major geographic relationships; (2) has listed definite objectives in terms of geographic thinking and feeling on the part of the children; (3) has thought through possible activities that will raise and solve problematic questions; (4) has made accessible to children sufficient appropriate geographic tools; (5) has in mind the evidences of growth that may appear as the unit proceeds; and (6) has devised means of testing and evaluating to what extent the children have acquired the possible understandings and feelings for which the unit was planned.

While it is essential that a teacher think through the development of each unit in terms of objectives, understandings, activities, materials, and outcomes, this pre-plan is not an inflexible pattern to be followed explicitly. It is preparation for his intelligent guidance in the children's planning, executing, and evaluating the activities of the unit.

Throughout the work in elementary school geography, correlations and integrations should be made with other subject fields. An illustration of how this can be worked out is shown in the following material indicating correlations and integrations with science.

Weather		
First Year	*Second Year*	*Third Year*
Observe and discuss weather in terms of warm, hot, cool, cold, quiet, windy, very windy, rain, hail, snow. Build up weather records for Sundays.	Continue points emphasized in the first year. Note changes in weather with seasons; with direction from which wind comes. Learn names of seasons. Extend weather record.	Continue work outlined for previous grades. Find how clouds are formed; conditions under which clouds furnish rain. Keep detailed weather chart in terms of date, direction from which wind is blowing, outdoor temperatures; general description of weather. Read thermometer indoors and outdoors.
Sun Position		
Relation of sun to heat and light. Point to sun in morning; at noon; in late afternoon. Learn directions: east, west, north, south.	Continue points emphasized in the first year. Extend directions to intermediate points. Note shortening of days as sun moves downward from zenith.	Note that sun moves farther away from zenith as winter approaches. Learn names of months in different seasons. Note that pathway of sun across the sky becomes shorter as it moves downward from the zenith. Note direction toward which sun lowers from zenith. Note relation of length of sun's pathway across the sky to the length of day. Note position of sun at noon in relation to zenith. Note effect of position of sun on temperature. Note direction in which shadow falls and length of shadow at different periods of day. Mark end of shadow cast by rod set up in school yard. Note position of sun on shortest day of year; longest day of year. Note relation of movement of sun to length of day; to temperature.

Art, music, health and physical education, and other phases of the school program contribute to the objectives that are set up for geography. Likewise, geography contributes to these subjects. The plan

of development for any given school will depend upon the plan of organization for that school.

Suggested Allocation of Work by Years

First and Second Years	Activities resulting in understandings that are basal for later geographic education
Third Year	Basal understandings concerning the local district
Fourth Year	Selected regions contributing to an initial world concept
Fifth Year	United States, Canada, and Newfoundland
Sixth Year	European countries and their outlying areas with one exception—outlying areas of British Empire not included
Seventh Year	British Empire; Africa as a whole; China, Japan; Asia as a whole; and Latin America (Middle America, South America); comparative summary of land and water areas of the earth
Eighth Year	The United States, Pennsylvania, and the local district in their relations to the world
Senior High School	Geographic understandings of world regions as shown in work and recreational activities and distribution of population in their relation to climatic and land form regions, mineral deposits, and other natural resources First Course: Fundamentals of Advanced Geography—geographic understandings of the major climatic and physiographic regions of the world; analysis of the relationships between the cultural layout and the natural environmental complex of each region Second Course: Economic Geography—geographic analysis of producing and nonproducing areas; nature, volume, and major traffic lanes of world trade and transportation; comparative study of these phases of world trade and transportation

Sequence of Units Within Years for Geography Course of Study

The term "unit" is used in these suggestions to indicate blocks of subject matter. In organizing teaching units, teachers may wish to combine a number of these blocks. Experience has shown that the number of distinct units which can be developed adequately in any one year is relatively small.

Where modifications are made in the sequence of units to meet local conditions, the suggestions offered will nevertheless be found helpful in developing courses of study.

Third Year

Basal understandings concerning the local district

Unit I Food
Unit II Clothing
Unit III Shelter
Unit IV Transportation and Communication

In the third year the objective is to present work in geography which may be integrated with the work in science and the social studies. The curriculum should plan for experiences with natural and cultural items fundamental to geographic concepts. Activities relating to food, clothing, shelter, transportation and communication constitute a background for this work. The children should have experiences in such activities as visits to a market, a farm, a store, a station, a post office.

Map making and ability to read maps may be developed by mapping some of the trips.

Throughout the year the children should observe and record sun behavior and elements of weather. Establish concepts of the directions north, south, east, and west by the location of the noon sun and the noon shadows.

TYPE OUTCOMES

1. An appreciation of the dependence of city dwellers upon those living in rural districts, on farms, and of the dependence of folk in rural districts on farms upon city dwellers
2. An appreciation of our adjustments to seasonal changes
3. The habit of determining direction by observation of the noon sun and the noon shadows
4. Skill in making one's own map to record a route followed in making a trip
5. Skill in observing cultural and natural items in the landscape or environment of the child's experiences
6. Realization that we are in part dependent on warmer and colder regions for some of our food and clothing

Fourth Year

Selected regions contributing to an initial world concept (Life in each region should be related to sun behavior.)

EQUATORIAL REGIONS

Unit I Life in the Congo Region
Unit II Life in Deserts and Oases

MIDDLE LATITUDE REGIONS

Unit III Life in the Mediterranean Region
Unit IV Life in the Highlands of Switzerland
Unit V Life in a Lowland Region—Holland
Unit VI Life in the Kirghiz Steppe (an interior grassland region)

POLAR LATITUDE REGIONS

Unit VII Life in a Mountainous Coastal Land—Norway
Unit VIII Life in Arctic Lands

Unit IX Life in a Far South Land and a Visit to Antarctica
Unit X A Review of Journeys and Some New Lands

TYPE OUTCOMES

1. Skill in recognizing by means of symbols, cultural items, such as cities and political boundaries, and natural conditions, as highlands and lowlands, represented on a political-physical map and a globe
2. Habit of obtaining information from available sources, such as pictures, maps, people, books
3. A realization that the work, play, and customs of children and adults vary greatly with different natural environments

Fifth Year

United States, Canada, and Newfoundland

Unit I Western Interior Highland Region
A. Grazing and Irrigated Crop Areas
B. Columbia Plateau Wheat Area
C. Northern Rocky Mountain Forest Area
Unit II Pacific Region
A. Northern Pacific Lumbering and Fishing Area
B. California Sub-tropical Farming Area
Unit III Central Farming Region
Unit IV Southern Farming Region
Unit V Appalachian Mining and Manufacturing Region
Unit VI Middle Atlantic Mixed Farming and Industrial Region
Unit VII New England-Canadian Maritime Region
Unit VIII Great Lakes-St. Lawrence Industrial and Commercial Region
Unit IX Canadian-Newfoundland Hunting, Fishing, and Logging Region
Unit X Canadian-Alaskan Hunting, Fishing, and Reindeer Grazing Region
Unit XI Canada as a Whole
Unit XII United States as a Whole (Continental United States)
Unit XIII Outlying Areas of the United States and Their Relations to the United States
Unit XIV The United States, Canada, and Newfoundland: A Summary

TYPE OUTCOMES

1. Skill in using as basic sources of information such geographic tools as pictures, physical-political globe, and physical-political, precipitation, and population maps; specimens and books
2. Habit of making constant use of index and table of contents, and skill in using them
3. Habit of using various available sources of geographic information in developing a unit of work
4. Realization of the relationships existing between work activities, recreational activities, and general manner of living and the natural environment factors in the various regions of the United States and Canada

5. Skill in visualizing as a whole each region of the United States and Canada after it has been studied
6. Appreciation of the fact that many workers in various parts of the United States and Canada contribute to our comfort and happiness and also to the comfort and happiness of peoples in other parts of the United States and Canada
7. Appreciation of the relationship between the distribution of population of the United States and Canada and the natural environment
8. Appreciation of the relationship between the work pattern (distribution of work activities) of the United States and Canada and the natural environment

Sixth Year

European Countries: Homelands and Outlying Areas (Comparison with similar areas studied in Fourth, Fifth and Sixth Years will be made in each unit.)

Unit I Scandinavian Peninsula and the Baltic Countries
- Scandinavia: Norway and Spitzbergen, Sweden
- Baltic Countries: Finland, Estonia, Latvia, Lithuania

Unit II Small North Sea Countries and Outlying Areas
- The Netherlands, Belgium, Denmark, and Their Respective Outlying Areas, and Iceland

Unit III Germany

Unit IV France and Outlying Areas

Unit V Mediterranean Peninsulas and Outlying Areas
- Iberian Peninsula; Spain and Outlying Areas; Portugal and Outlying Areas
- Italy and Outlying Areas
- Greece

Unit VI Switzerland and Austria

Unit VII Other Central European Countries: Poland, Czechoslovakia, Hungary, Rumania

Unit VIII Balkan Countries: Yugoslavia, Albania, Greece (recalled from Unit V), Turkey, and Bulgaria

Unit IX Union of Soviet Socialist Republics

Unit X Other Small Areas of Continental Europe
- A. Independent Principalities: Andorra, Liechtenstein, Monaco, San Marino
- B. Grand Duchy: Luxembourg
- C. Area under the Protection of The League of Nations: Free City State of Danzig

Unit XI The British Isles
- A. The United Kingdom: Great Britain (England, Scotland, Wales), Northern Ireland
- B. The Irish Free State

Unit XII Europe as a Whole on the Basis of Land Uses or Work Patterns, and Distribution of Population

TYPE OUTCOMES

1. The habits of turning to maps, graphs, pictures, and specimens for information; of checking that information by consulting additional references; skill in the use of each of these tools

2. Skill in interpreting maps symbols representing natural items, such as surface features, temperature, precipitation (rainfall), waterfalls, glaciers, tundra areas, and coal and other mineral deposits, in relation to the cultural features, activities, and conditions
3. An appreciation of the different adjustments that the various peoples make in order to earn a livelihood in their respective environments
4. An understanding and appreciation of the interdependence of regions and nations
5. The ability to read and interpret the bar graph and the line graph; to construct the bar graph and the line graph

Seventh Year

Unit I Australia

Unit II New Zealand and Other British Areas in the Pacific Ocean: British Parts of New Guinea, Fiji Islands, Solomon Islands, Nauru Island, New Hebrides

Unit III British Southern Africa: Union of South Africa, Swaziland and Basutoland, Southwest Africa (a mandated territory), Bechuanaland, Rhodesia (South and North)

Unit IV British Eastern Africa: Nyasaland, Tanganyika (a mandated territory), Kenya, Uganda, Anglo-Egyptian Sudan, Somaliland

Unit V British West Africa: Nigeria (a part is mandated), Ashanti and Gold Coast (a part is mandated), Sierra Leone, Gambia

Unit VI India and Ceylon

Unit VII British Areas along the Route to India and the Far East: Route to India—Gibraltar, Malta, Cyprus, Palestine, Suez Canal, Aden, Socotra, Ceylon; Federated Malay States—Singapore, British Borneo, Hong Kong

Unit VIII China

Unit IX Japan

Unit X The Near East as a Whole—Turkey, Syria, Palestine, Arabia, Iraq, Persia, Afghanistan

Unit XI Africa as a Whole, with some individual attention to the self-governing independent countries: Egypt, Abyssinia (Ethiopia), Liberia

Unit XII Middle America: Mexico, Central American Countries, West Indies

Unit XIII Atlantic Countries of South America: Brazil, Uruguay, Argentina

Unit XIV The Pacific Countries of South America: Chile, Peru, Ecuador

Unit XV The Interior Countries of South America: Bolivia, Paraguay

Unit XVI The Caribbean Countries and Adjoining European Outlying Areas: Colombia, Venezuela, The Guianas

Unit XVII The Polar Regions: Arctic Region, Antarctica

Unit XVIII A Panorama of the Earth
Distribution of land and water
The earth's covering of natural vegetation: deserts, grasslands, forests

Divisions of earth's surface according to basic geographic adjustments: agricultural lands, grazing lands, manufacturing regions, fishing regions, lumbering regions, unused lands
Chief transportation routes: ocean, inland water, railroad, aviation
Distribution and density of population

TYPE OUTCOMES

1. Skill in finding late statistics in such reference books as The Statesman's Yearbook, Yearbooks of the United States Department of Agriculture and Department of Commerce, and the World Almanac
2. Ability to interpret types of graphs, such as bar, line, and circular
3. Skill in making from statistical data such graphs as bar, line, and circular
4. Skill in explaining in part work activities or commodity productions, as portrayed on a map in the light of items in the natural environment shown on other maps
5. Skill in mapping commodity production areas, such as coffee-producing areas in South America
6. Skill in selecting and using such tools as specimens, models, pictures, maps, and graphs in presenting geographic information to others

Eighth Year

The United States in Its World Relations

The geographic individuality of the United States is developed in the fifth year. On the other hand, the goal in the eighth year is an understanding of the work pattern, the population pattern, and ways of living in the United States as they are related in the natural environment pattern of the world.

Unit I A Survey of Land Utilization in the United States
Unit II The World a "Family of Nations"
Unit III The Nature, Origin, and Destination of the Exports of the United States or How the United States, in Part because of Its Geography, is Brought into World Relations through Its Exports
Unit IV The Nature, Origin, and Destination of the Imports of the United States or How the United States, in Part because of Its Geography, is Brought into World Relations through Its Imports
Unit V Movements of the United States Trade
Unit VI Activities Other than Trade Which Bring the United States into World Relations
Unit VII Summary of the United States in Its World Relations, Especially from the Geographic Viewpoint

Pennsylvania, the County and the Local District in Their Relations to the United States and the Rest of the World

Unit VIII Work Pattern or Commercial Land and Water Utilizations in Pennsylvania as Related to the Elements of the Natural Environment

Unit IX Pattern of Recreational Activities in Pennsylvania as Related to the Elements of Natural Environment
Unit X Pennsylvania's Work and Recreational Pattern in Its Relation to Those Patterns of the United States and the Rest of the World
Unit XI Population Pattern in Pennsylvania Interpreted Geographically, then Considered in Its Relation to the United States and World Patterns of Populations
Unit XII The Geography of the Local District
Unit XIII The Geography of the County

TYPE OUTCOMES

1. Skills in observing cultural and natural items in the actual landscape as one means of evolving the geography of the local district and of such sections of Pennsylvania as are accessible
2. Desire for and skill in using geographic materials of a more detailed and exact nature than are the tools used in the fifth year, such as carefully selected governmental, trade, and other research publications
3. An appreciation of the geographic viewpoint in connection with conservation
4. An appreciation of the position of the local district, Pennsylvania, and the United States in the world work pattern and the world population pattern as related to the world natural environmental pattern
5. The habit of applying a geographic interpretation in the solution of local, state, national, and international problems

Senior High School

Geographic understanding of world regions as shown in work and recreational activities and distribution of population in their relation to climatic and land form regions, mineral deposits, and other natural resources

Fundamentals of Advanced Geography

Unit I How Man Has Adjusted Himself to the Rainy Low Latitude Type of Climate
Unit II How Man Has Adjusted Himself to Arid and Semi-arid Low Latitude Types of Climate
Unit III How Man Has Adjusted Himself to the Wet and Dry Low Latitude Types of Climate
Unit IV How Man Has Adjusted Himself to the Mountain Types of Climate in the Low Latitude
Unit V How Man Has Adjusted Himself to the Mediterranean Types of Climate of the Middle Latitudes
Unit VI How Man Has Adjusted Himself to the Sub-tropical Humid Type of Climate Found on East Coasts in the Middle Latitudes Equatorward from Forty Degrees
Unit VII How Man Has Adjusted Himself to the Marine Type of Climate Found on West Coasts Poleward from Forty Degrees
Unit VIII How Man Has Adjusted Himself to the Humid-continental Types of Climate

Unit IX How Man Has Adjusted Himself to the Modified Humid Continental Type Found on East Coasts above Forty
Unit X How Man Has Adjusted Himself to the Arid and Semi-arid Continental Types of Climate in the Middle Latitudes
Unit XI How Man Has Adjusted Himself to the High Latitude Types of Climate
Unit XII How Human Activities are Related to the Relief Features of the Earth
Unit XIII How Human Activities are Related to Soils, Sub-soils, and Minerals
Unit XIV Summary: The Signifieanee of Geographical Location

Economic Geography

Unit I Man's Utilization of the Natural Environment
Unit II The Leading Commercial Regions of the World
Unit III The Tropies in the World's Commercial Pattern
Unit IV The World Patterns of Certain Commodities in World Trade
Unit V The Orient in Its Commercial Setting
Unit VI The Oceans as World Highways
Unit VII The Trade Routes of the Continents
Unit VIII Movements of World Trade
Unit IX The Development and Work of the Trade Center and the World Entrepot'
Unit X The Basis of World Trade

FOURTH YEAR

I. General Survey for the Year

The major objective of the fourth year geography study is the gaining of world understandings. These understandings of the world as a whole consist of simple direct relationships between certain human activities to contrasting types of natural environments at varying distances from the equator. No attempt is made to study a particular region or land mass as such, nor are political divisions, differences of raee, or standards of culture emphasized. Certain selected regions are considered merely as examples of simple and direct responses of human beings to the natural environment. At this level, the attempt is made to have pupils identify themselves psychologically with the various peoples studied rather than solve abstract problems. For example, in the unit on deserts the question, "What would I do today if I were Ahmed living on the Nile?" is considered rather than the question, "Why is Egypt an important country in spite of its deserts?"

In the fourth year eaeh unit attempts to study some one natural feature with its corresponding human responses. Furthermore, regions of striking contrasts are ehosen in order that the various cultural and natural elements will be given greater emphasis. As a child will notiee more readily a picture painted in vivid and contrasting reds and greens, so will he remember a region of daily rainfall, of hot-all-the-year climate, and of thick "jungles" in contrast to that of his home environment. Political divisions are not important in this

year's work. The important locational concepts are those with reference to the equator, continents, oceans, and rivers.

In these units for the year, the alert teacher will avail herself of all possible environmental materials that will help to form clear concepts. For example, a circus that pupils have attended may be used to develop a concept of an elephant. The teacher should so interpret an elephant that it will not be an isolated fact in a circus, but an integral part of the very lives of the people whose environment is the subject of study.

The titles of the units* suggested are as follows:
Unit I—Life in the Congo Region
Unit II—Life in Deserts and Oases
Unit III—Life in the Mediterranean Region
Unit IV—Life in the Highlands of Switzerland
Unit V—Life in a Lowland Region—Holland
Unit VI—Life in the Kirghiz Steppe (an interior grassland region)
Unit VII—Life in a Mountainous Coastal Land—Norway
Unit VIII—Life in Arctic Lands
Unit IX—Life in a Far South Land and a Visit to Antarctica
Unit X—A Review of Journeys and Some New Lands

A. Objectives

1. Major understandings to be gained
   a. That the food, clothing, shelter, means of travel, and ways of making a living of the people in the regions developed during the fourth year are related to a few outstanding natural items characteristic of these regions
   b. A beginning understanding of the world as a whole which would be an outgrowth of the study of type regions selected to illustrate the relation of human activities to types of natural environment at varying distances from the equator
2. Abilities to be developed
   a. Ability to see and tell in own language, reasons for what men do in the regions studied (These reasons are, of course, simple relationships involved in the above types of major understandings.)
   b. Ability to identify specific types of relationships with specific regions studied
   c. Ability to apply simple sun behavior understandings gained
   d. Ability to use simple maps and globe
      (1) To read the symbols on simple maps
      (2) To read direction and comparative distance on a map and on a globe
      (3) To recognize the same symbols on the globe as on the map
      (4) To read into a map simple relationships
      (5) To read into the globe natural conditions associated with distance from the equator in terms, such as "near the equator" and "near the poles"

* The term "unit" is used in these suggestions to indicate blocks of subject matter. In organizing teaching units, teachers may wish to combine a number of these blocks. Experience has shown that the number of distinct units which can be developed adequately in any one year is relatively small.

e. Ability to use pictures (landscapes)
   (1) To secure descriptive ideas concerning human and natural items from pictures and actual landscapes
   (2) To read into pictures simple suggested relationships of one-type-level
f. Ability to recognize and use correctly technical and semi-technical terms needed in expressing ideas of one-type-level relationship
g. Ability to read simple geographic material, to select descriptive ideas concerning cultural and natural items, and to secure interpretive ideas

3. Habits to be formed
   a. The habit of using simple pictures and maps as well as word material as a source of information
   b. The habit of seeking to find reasons for man's activities when reading about a specific region
   c. The habit of checking information secured from various sources, one against the other
   d. The habit of noting in the home landscape, and while traveling, natural and cultural items and their probable relations

4. Attitudes to be developed
   a. A beginning appreciation of the value of pictures, actual landscapes, maps, and globes as sources of information
   b. Interest in pictures of a geographical nature; in travel books, magazines, and other reading material of a similar nature
   c. A sympathy and understanding of peoples in varying types of natural environment

II. Suggestions for Development of Units

Unit I—Life in the Congo Region (This is a type development, suggestive of procedures in other units. See page 13)

A. Purpose

1. A comprehension of the geographic personality of the Congo Region

   The people living in the Congo Region build houses of tree branches, vines, leaves, and bark, and with steeply sloping roofs; travel mainly by water in dugout canoes or river steamers, or on foot along narrow trails; trap and spear fish; farm small cleared patches to raise manioc and bananas for food; gather and trade wild rubber, palm nuts, and some ivory; and wear little clothing. These and other activities are related to the natural conditions in this region, such as much rainfall and much heat because the noon sun is never far from overhead, dense forests, a great river and many other streams in which fish are plentiful, and the presence of numerous troublesome insects.

2. An understanding of the interrelation between man and the natural environment in the Congo

Houses are built with sloping roofs because much rain falls throughout the year.

Houses are built of leaves, trunks of small trees, branches, and vines because of the abundance of forest materials and the scarcity of other materials.

Bananas, manioc roots, and palm oil are used as food in part because they will grow in a hot, rainy land.

The people use dugout canoes in which to travel on the rivers partly because logs can be secured from the dense forests along the river.

People travel chiefly on the river in part because it is very difficult to make trails or roads through the dense forests.

Wood is used as fuel on the river boats partly because of its abundance.

Some people make a living by fishing because most of the streams and rivers contain many fish.

B. Suggested Activities

The teacher must keep in mind that the Congo Region is one in which the food, the clothing, the houses, the ways of travel, and the work of the people are different from our own; and consequently the children wonder about them and ask questions concerning them. In trying to answer their questions, the children learn that these differences are explained in part by a few outstanding natural facts. These are much rainfall, high temperatures all the year, dense vegetation, a great river, and many other streams. The children can be led readily to see the relationships between the people's ways of living and the environment in the Congo Region. Many pictures are absolutely necessary in all the fourth year units in order that the children may form accurate concepts.

1. Approach

Through questions and discussion such as follow, the teacher may introduce the children to the travel idea and help them to get the spirit of travel:

How many of you went on a vacation last summer?

Where did you go?

How did you get there?

As you rode along, what did you do? What were some of the things you saw?

The children will mention various things, such as forests, men working on the road, sheep or cows in pastures, and men plowing or harvesting crops.

When you arrived at the place where you were going to spend your vacation, what did you want to find out about it?

Did you bring home anything to help you remember the good times that you had?

Some of them will have souvenirs and pictures. The pictures are what the teacher should emphasize here.

What kind of pictures did you take?

In some cases the children may have bought pictures and postcards.

All of us seem to have spent our summer vacations in different places. How would you like to take a trip together? You know we could all take a trip together. The other day a friend of mine said she would like to take a trip to visit some people who live far away from here. They live on and near a great river, across the ocean in Africa. How many of you would like to go there to see this land of the Congo River? How can we do this without leaving our schoolroom?

The children will usually say, "With pictures and stories," but if they do not, the teacher as a member of the group, suggests it.

At this point, the teacher may offer to show them a picture taken in the Congo. It may be a picture of a Congo River steamer. Questions and a discussion by the children and teacher follow, such as

What do you see in this picture that is different from things in our own land?

What are the piles in the picture? What are the men doing with the wood? What will they use it for? What do we burn to run our boats? Why do they use wood instead of coal?

All these questions bring out the fact that there is plenty of wood along the Congo, but no coal. After noticing how the people are dressed, the children may decide that it is very warm.

The teacher advises that they should see a few more pictures taken along the Congo River to be sure that they wish to take a trip down the river. The teacher suggests that perhaps some would like to ask questions about the country and mentions that all good travelers ask many questions. They agree to be prepared to ask questions the next day.

The following day the children suggest questions, which are listed on the blackboard. Then the class evaluates them and groups them under specific categories, such as the country, the villages, the people. Examples of the questions that may be asked are:

How large and deep is the Congo?

What kinds of clothes shall we take?

Are there fish in the Congo?

Do they have any bridges in the Congo?

What kind of climate do they have in the Congo Region?

Does the country provide plenty of food?

What kinds of homes do the people have?

How do the people dress?

2. Development

In answering your questions, we are really trying to find out how the people in the land of the Congo make their work play and how their ways of living fit the kind of land

in which they live. Before we start on our journey, shall we look at a map to see where we are going?

An outline map is on the board or on a large sheet of paper. This map should consist of the basin of the Congo. There should be no names, but dots for places, such as the point of departure, Stanleyville, Leopoldville, Boma, Banana, Ponthierville, and lines crossing the river to indicate Stanley Falls. As the discussion goes on the children should connect scenes and descriptions with specific places along the river so that the map symbols for the Congo River, the Stanley Falls, and the towns along the Congo River will be associated with accurate mental images. Pictures for study may be placed either about the room or on a convenient table. Each picture should have two or three definite questions attached to it, calling the children's attention to specific items in the picture. Through studying the pictures, reading their texts and supplementary books, and class discussion the children should answer the questions raised at the beginning of the work. The teacher must so direct the discussions that the children understand the relationship between the people's ways of living and the natural conditions. Sun position and its relation to temperature, together with the length of day and night, must be developed by the teacher.

3. Culmination

At the close of the unit the children may summarize what they have discovered under topics chosen by themselves, such as

Clothes of the Congo River Region
Sources of Food in the Congo Region
Climate in the Congo River Region
Means of Travel
Means of Sending Messages
Plants
Kinds of Wood Found There
Materials Used for the Houses
Ways in Which the People Make Their Living
Plays of the Children
Things We Get from the Congo Region
Animals

Each of the children may be given a hectographed map of the Congo Region, similar to the large one on the blackboard, on which he is able to trace the journey.

Some of the children may write a story of their trip; others may prefer to make a picture record of their trip by sketching things they saw or by collecting pictures.

One of the children may make a picture check for the class. Copies can be made on the ditto machine. Each child may write a title under each of ten pictures.

Some of the children may work out a floor plan. All

gather around the floor plan to trace the trip, naming the villages and telling what they have seen at various places.

C. Evidences of Pupil Growth

1. The ability to recognize and translate into concrete imagery the map symbols for
   Boma, Congo River, land, Leopoldville, ocean, seacoast, Stanley Falls, Stanleyville

2. The ability to use properly the terms
   bananas, clearing, dugout canoe, downstream, ivory, jungle, manioc, oil palm, oil palm nuts, rubber, and upstream

3. The ability to visualize
   a. the means of travel on land and water
   b. the kinds of food eaten
   c. the clothing of the people
   d. the kinds of houses
   e. the work of the people
   f. the natural feature—dense forests
   g. the natural condition—hot, moist atmosphere

4. An understanding of the reasons for
   a. the use of dugout canoes
   b. the use of wood for fuel on the river steamers
   c. the use of vines, leaves, and grass for building materials
   d. the building of steep-roofed houses with wide, overhanging eaves
   e. fishing as a means of securing food
   f. the use of traps, as well as nets, for fishing
   g. the use of manioc for food
   h. the small gardens
   i. the use of the banana for food
   j. the use of palm oil
   k. the gathering of palm nuts
   l. the gathering of rubber and ivory
   m. the wearing of little clothing
   n. the use of log drums to send messages
   o. the kind of home the white people have
   p. the building of the railroad from Leopoldville to Boma
   q. the wood-burning engine
   r. the river steamer and train running only in the daytime
   s. the people living chiefly along the streams

5. An attitude of respect for the people of the Congo because they have learned to adjust their ways of living to a land of much rainfall, hot and damp air, many streams, and dense forests

D. Tests

1. New words to use in sentences

   Here is a list of words. Below are sentences with blank spaces. Show that you know the meaning of each word

or group of words by writing the correct word on the blank in the sentence.

cacao tree	equator	natives	reeds
current	ivory	oceans	swamp land
dense forest	manioc	oil palm tree	teapoy
dugout	moist	raphia	upstream
	mouth of a river	rapids	

a. The slender stems of certain grasses are called .....
b. The onward movement of the river is the .....
c. The place where the river flows into the sea is the .....
d. A part of the river where the current flows very swiftly is a .....
e. To sail against the current is to sail .....
f. The greatest bodies of water are .....
g. A plant growing in the Congo Region, the root of which is made into flour, is .....
h. The tusks of the elephant give us a valuable product, ...
i. A forest where trees and vines grow close together is a .....
j. The people who were born and live in Belgian Congo are the .....
k. A kind of fiber is called .....
l. If a place is damp or wet it is said to be .....
m. An imaginery great circle, halfway between the north and south poles, is the .....
n. Wet, spongy land is .....
o. The bean from which cocoa is made grows on the .....
p. A palm tree from which the natives get oil is the .....
q. The natives travel on the river in .....canoes.
r. A kind of hammock used for travel in Belgian Congo is the .....

2. Reasons why

As you read the books, did you find reasons why the people of Belgian Congo live as they do? Here are a number of statements telling how the people live. Each statement has three answers. Put a check (√) before the answer that tells why.

a. The people of the Congo are fishermen partly because—
   there are few wild animals which are good to eat found in the forest.
   the natives smoke the fish over wood fires.
   many fish live in the many rivers and streams.
b. They wear few or no clothes in part because—
   the rainfall is very heavy.
   it is always warm.
   they get cotton cloth from the white traders.

c. The steamers on the Congo burn wood for fuel partly because—
   the wood must be dried before burning it.
   the natives cut the wood and pile it on the river bank.
   great forests grow near the river bank.

d. The homes of the Congo people are made from reeds, grasses, and leaves partly because
   these materials grow here and are easy to use.
   such a house would not be warm enough for us.
   banana leaves make an excellent roof.

e. The Congo natives make dugout canoes because
   they burn the log to get it the right shape.
   great trees grow near the river bank.
   the current is swift and a strong boat is needed.

3. Plants of the Congo

Here is a list of words. Below is a paragraph. On each blank in the paragraph write the word which belongs there.

banana	fibers	nut
butter	flour	oil
cacao	fruit	roofs
cocoa	leaves	rubber
dense	manioc	

Growing in the Congo are .....forests. One of the many kinds of trees is the .....palm. The .....from the trunk of this tree are made into cloth, bow strings, nets, and fishing lines. The leaves are used for the .....of houses. The ..... of this tree is crushed and the oil is used for .....

Another useful tree is the ..... Besides using the fibers and .....,the ..... is one of the chief foods of the natives.

The .....tree furnishes us with gum from which we make automobile tires. The bean of the ..... tree is crushed and made into ..... The natives prepare the root of the .....plant, making it into .....for bread.

4. A matching game

Below are two columns, A and B. The endings for column A are found in column B. Read the first sentence in column A, then find its ending in column B. Write the letter "a" on the blank before the right ending. Then read the second sentence, putting the letter "b" on the blank before the right ending, and so on. (The teacher must be certain that all children understand the directions for this part of the test.)

Column A	Column B
a. The natives make rafts by tying logs together with vines because	....the dense, rapid growth make road building very difficult.
b. When the white traders buy from the natives, they use cotton cloth, knives, and salt for money because	....the many reeds, grasses, fibers, and the ivory furnish the necessary materials.
c. Belgian Congo is always moist and damp because	....the natives need these things and cannot get them from their own land.
d. The natives make tools such as spears and bows and arrows because	....it rains almost every day.
e. The forest roads are only narrow trails because	....near the river are dense forests of trees and vines.

5. A summary exercise

Can you finish the sentences given below? Be sure to tell WHY each is true. (Some children can give two reasons.)

a. The chief foods of the Congo natives are bananas, wild fruits, wild animals, manioc, palm oil, and fish because .....

b. They wear very little clothing because .....

c. Their homes are grass huts with steep roofs because....

d. They make and use bows, arrows, and spears because....

e. They are farmers, hunters, and fishermen because .....

f. They trade ivory, cacao, and palm oil for cotton cloth, knives, and fish because .....

g. They weave baskets and carve ivory because .....

h. They travel on the river in dugout canoes and on rafts because .....

i. They travel on land by foot or by teapoy because ....

j. They send messages by means of drum signals because .....

UNIT II—Life in the Desert and Oases in the Sahara Region and the Nile

From the Congo Region, the class may travel to the desert and the Nile region by land, through the grasslands of Africa, into the desert, and then to the Nile.

This region gives a contrast to the rainy, low latitudes and the sharpness of the contrast will aid in developing the concepts. The emphasis should be on how the activities of these people are affected by the lack of or less rainfall, the high day-time temperatures with cool-to-cold nights, the necessity of moving their flocks to secure new pastures, the necessity of careful use of the water available in the

oases, the particular types of plants, and the type of flat roofed adobe homes.

The teacher should be careful to check her information before developing this unit as there are many misconceptions concerning life in desert regions. Pictures should be used freely. They make a very effective introduction to the unit and a means for basal learnings as the children will contrast the type of home and animals seen in these pictures with those in the Congo Region. These questions will arise naturally. The general form of development suggested in the Congo Region should be used in developing this unit.

Unit III—Life in the Mediterranean Region

In this unit, no one country should be studied but a general view of the way people live throughout the Mediterranean Region should be the chief objective. This may be done by means of a trip through the Mediterranean or by selecting specific sections, such as Greece, western coastal region in Italy, the coastal region of southern France, the southern and eastern coastal region, and the Mediterranean valleys of Spain.

The aim is to assist the children to realize that throughout this region the people live in much the same way because the natural conditions are much the same. At the close of the unit, the children should be able to recognize the natural and cultural items characteristic of this region, such as the olive tree; should be able to locate on a map the places that they have visited and such natural items as they have needed in this unit. The terms peninsula, island, mountain, and volcano should be developed while studying this unit. These are new terms that the children have not contacted in previous units.

Unit IV—Life in the Highlands of Switzerland

From the Mediterranean region, the class can travel into Switzerland by going up the Rhone or across the Alps from Italy. In the latter case, the children will come into contact with such new terms as mountain pass and tunnel, which can be developed in the study of Switzerland.

Emphasis should be laid upon the activities of the people under such natural conditions as deep, narrow valleys, high forest-covered mountain slopes, high pastures, abundance of water, waterfalls for power, and beautiful scenery. The people of Switzerland have utilized to the best advantage these natural conditions; hence, the class can secure an appreciation of what man is able to do under difficult conditions if he so chooses.

Many new terms will be developed, such as mountain pass, tunnel, snow field, glacier, "Alp," hydro-electric power, wood carving, dairying, avalanche, altitude, tourist, and migration.

Unit V—Life in a Lowland Region—Holland

From Switzerland the class moves northward, down the Rhine to Holland at the mouth of the Rhine. Life in this region sharply contrasts in many respects that in the highlands of Switzerland, yet dairying is an outstanding industry of both regions for somewhat

different reasons. This fact should be developed clearly with the children.

By the time they have traveled this far north from the equator, the position of the sun has changed considerably. In each unit, sun position should have been developed so that now the children are beginning to realize that the farther away from the equator they are, the lower the sun is in the sky at noon, and that there is an increasing difference in the length of day and night in summer and in winter. This is a matter of observation and the reasons behind it are not developed as yet. The position of the sun in Holland at noon in summer and in winter may be compared with the position of the sun in the other regions previously studied and also with that of their own home. The effect of this sun position on temperature, the length of the growing season, the necessity of providing for the winter season, and, in turn, their results upon the activities of the people should be noted.

Not many new terms are developed in this unit; but many formerly developed ones are being used frequently, such as downstream and delta. Probably the only new terms will be dykes, canal, polder, bulbs, windmill, wharfs, and some terms connected with fishing.

Unit VI—Life in the Kirghiz Steppe

At this stage a unit developing the life of the people in a grassland region of the middle latitudes in the interior of a continent may be studied. The Kirghiz Steppe is probably the best region to illustrate how man adapts his activities to a semi-arid region in the interior of a continent. Unfortunately, few children's textbooks give much material, if any, on this particular unit; but the teacher will find ample material in the following references: Huntington and Cushing, "Principles of Human Geography;" Thomas, "Asia;" Hoke, "Land and Life in Russia and the Old East;" Case and Bergsmark, "College Geography."

This unit will afford opportunity for comparison and contrast with low tropical latitude, desert and semi-arid regions, and also with life in Switzerland and in Holland. The people of the Kirghiz Steppe have adjusted themselves unusually well to natural conditions. Such terms as yurt, steppe, and others, characteristic of the life of these people should be carefully developed.

Unit VII—Life in a Mountainous Coastal Land—Norway

This unit is of particular importance because it is the first unit in which a region is sufficiently far away from the equator to have a period of twenty-four hours of sunlight in summer and a period of twenty-four hours without the sun in winter. Probably the best way to develop this with the children is to take a trip along the fiord coast of Norway, noting where the people live and how they make a living from the sea and from the land, the crops raised on their tiny farms, the use of high pastures, and in many places the use of the forest. Fishing, farming, and lumbering are the three outstanding activities; the relation of each to the natural conditions should be carefully developed.

The work in connection with sun position can be done very carefully in this unit. When children hear or read that in the winter the Norway children go to school when it is still dark, that they come home

after the sun has set, and that on Christmas day some places have no sun at all, they realize the short period of daytime in the winter.

While in Norway a trip may be made to the region of the Lapps. This is not a separate unit but a continuation of the study of life in Norway. Here again, there is a type of nomadic herding, but with the use of reindeer rather than cattle and sheep. It also serves as an approach to the Eskimo unit. Many new terms are needed in this unit, such as fiord, saeter, and other characteristic ones.

Unit VIII—Life in Arctic Lands

For this unit, life among the Eskimos of the western coast of Greenland or of the Copper Eskimos on the Arctic coast of Canada near the mouth of the Coppermine River may be used. Either is characteristic of these peoples who depend on the life in the Arctic Seas for food, clothing, and even materials for shelter. There is such an abundance of material on this unit that the problem is more a question of selection.

Unit IX—Life in a Far South Land and a Visit to Antarctica

In the preceding units, the children have been able to see by vicarious experiences, why life changes as one moves northward from the equator. In order that they may realize also that similar changes take place as one goes south from the equator, it is well to make a trip southward to Antarctica.

Starting from the Arctic Regions, the class should travel southward, on the Atlantic, through the Gulf of Mexico and the Caribbean, through the Panama Canal, then southward across the Pacific to the northwestern coast of Australia. In the class discussion of the trip, a world map should be used. The teacher skillfully guides the children to an understanding of the changing temperatures as they go southward and, consequently, of the necessity of changing their clothing because of the effects of the changing position of the sun. If time permits, a few stops along the way may be made. Pictures to illustrate scenery may be used, such as pictures of the vegetation and life in the Panama Canal Zone.

The reason it is suggested that the class land on the northeastern coast of Australia is that the teacher must keep in mind that this unit is not a study of Australia as a continent, but the purpose of the unit is to enable the children to understand that in the Southern Hemisphere the northern regions are the warmer and that the sun is usually in a northern sky at noon; that December, January, and February are summer months. Consequently, the unit should be planned to make a trip from Rockhampton, southward along the eastern coast of Australia.

In the vicinity of Rockhampton will be seen banana trees, sugar cane plantations, and palm trees. Then as one travels southward, the sun gets lower in the sky, temperatures are lower, vegetation changes, and the activities of the people change until in the south are wheat farms, dairy farms, orchards, such as were seen in the Mediterranean lands of Europe. If this unit is carefully developed, the children will be able to visualize conditions in the Southern Hemisphere just as they already have done in the Northern Hemisphere.

From southern Australia, a trip should be made over to New Zealand; then an imaginary trip may be taken with Byrd to Antarctica.

In this part of the unit, comparisons may be made with conditions in the Arctic. The children should understand that the explorations in Antarctica have been made possible by the lessons learned from the Eskimos in the Arctic.

It is in this unit that the terms Eskimos, poles, Tropic of Cancer, Tropic of Capricorn, Arctic and Antarctic Circles are finally clinched. Each one has been introduced as needed in previous units. The children should understand that the Tropics simply mark the distance north and south of the equator where the sun is vertical overhead some time during the year; that the Arctic and Antarctic Circles mark the place on the earth's surface beyond which there is a period during the summer, varying from one day to six months at the poles, when the sun shines twenty-four hours a day or longer, and during the winter season, there is a period of twenty-four hours or longer of darkness; and that north of the Tropic of Cancer, the sun is always in the southern sky at noon and that south of the Tropic of Capricorn, the sun is always in the northern sky at noon.

Unit X—A Review of Journeys and Some New Lands

In this summarizing unit, the teacher should use a globe and a world map or maps of the two hemispheres. The globe and maps used should have the equator, the Tropics, the Arctic Circle, and the Antarctic Circle clearly marked. One of the objectives of this unit is to give meaning to these lines through the recall of experiences and knowledge gained in previous units that the children may be able to apply this knowledge in new situations. As a result, such facts as the following should be connected with the earth lines named above:

> The equator marks all places halfway between the North Pole and the South Pole.
>
> The sun is always nearly overhead at noon for lands at the equator or near the equator.
>
> For lands between the Tropic of Cancer and the Arctic Circle—the sun at noon is always in the southern sky; the sun is lower in the sky than it is in lands near the equator; there is a summer and a winter season; and the summer season comes in June, July, and August.
>
> For the lands north of the Arctic Circle—the sun is always low in the southern sky; there is a time during the winter when the sun does not shine for twenty-four hours or more, and during the summer when the sun shines continuously for more than twenty-four hours; and June is a summer month.
>
> For the lands between the Tropic of Capricorn and the Antarctic Circle—the sun is always in the northern sky at noon; the sun is lower in the sky than it is in lands near the equator; there is a winter and a summer season; and the summer season comes in December, January, and February.
>
> For the lands south of the Antarctic Circle—the sun is always low in the northern sky; December is a summer month; there is a time during the summer season when the sun shines continuously for more than twenty-four hours, and during the winter season, when the sun does not shine for more than twenty-four hours.

As one goes farther and farther north from the equator, one finds cooler and cooler regions.

As one goes farther and farther south from the equator, one finds cooler and cooler regions.

The purpose of the first half of this summarizing unit is to give the teacher an opportunity to check by means of application exercises to find out whether or not the children really understand the facts and can apply them. Following the lessons with the slides, the teacher can use pictures for remedial exercises, assisting those children who do not understand the facts to acquire their meaning through additional practice.

The second half of the unit is to give the children glimpses of regions which they have not visited and to make the term "continent" and the names of the various continents have meaning for the children.

The major understanding to be gained from this unit is a realization that the lines on the globe, such as the equator, the Tropics, the Arctic and the Antarctic Circles, tell us certain facts about the lands which we have visited and those which we have not visited; they help us to know something about how the people live in those lands and why they live as they do.

Major Problem: How do the globe and our maps help us to understand how people live in any part of the earth and why they live as they do?

For the development the teacher needs a collection of pictures representing each of the continents. Textbook pictures may be used. Brief paragraphs descriptive of life and conditions in different regions may be used in connection with the pictures or for regions of which no good pictures are available.

A Review of Our Journeys

In our journeys we have gone from the hot, wet lands of the Congo to the cold regions farthest north and from there to an ice-covered land which is farthest south. I am going to show you some new pictures of these lands and I wonder how many will be able to recognize all of them. Before we look at the pictures, however, I want to tell you about some lines which we have on our globe and maps. These lines will help us tell where places are on the earth. Let us find the North Pole and the South Pole on our globe and maps. Now halfway between the poles you will find a heavy line drawn on the globe and also on the maps. All the places on this line are exactly halfway between the North Pole and the South Pole.

Do you see any place where we have been that is on or near this line? Yes, the Congo Region. This line is called the equator. The word means equal. Do you see why this line on our globe and maps is called the equator?

When we were in the Congo Region, where did we see the sun at noon?

The position of the sun in the sky at noon is what tells a person where he is. If the sun is almost overhead at noon he knows he is either on or near the equator. With certain instruments a man can measure the exact height of the sun at noon and find where he is on the earth's surface.

Find a dotted line north of the equator a third of the distance to the North Pole. What is the name of this line? If you lived in a place on this line you would always see the sun in the southern sky at noon except on June 22nd, when it would be directly overhead.

Now find a dotted line which is a third of the way between the equator and the South Pole. What is the name of this line? If you lived in a place on this line you would always see the sun at noon in the northern sky except on December 22nd, when it would be directly overhead. Do you remember any place we have been that the sun was directly overhead on December 22nd? (Rockhampton, Australia)

If you lived somewhere between these two lines, a part of the year you would look for the noonday sun in the northern sky and the rest of the year you would look for it in the southern sky. Later on you will learn other ways in which those lines help you.

There are two more lines on our globe and maps which we want to notice. We find another dotted line farther north. This line is the Arctic Circle. It passes through all the places where the longest day is twenty-four hours long. Between the Tropic of Cancer and the Arctic Circle we always look for the noonday sun in the southern sky. Now, let us see what happens south of the equator. Find the Antarctic Circle. Find the Tropic of Capricorn. If you lived anywhere between the Tropic of Capricorn and the Antarctic Circle you would always see the noonday sun in the northern sky. Where have we been in our journeys where the people always see the sun at noon in the northern sky? (Southern Australia)

The Antarctic Circle passes through all the places south of the equator where the longest day is twenty-four hours long.

You see these five lines help us to tell where the sun is in any part of the world. As we look at our pictures, we will see where the places are in relation to these lines.

What places does this picture remind you of? What signs in the picture remind you of the Congo? Yes, this is a scene along the Congo. What do the people in the Congo get from these palm trees? What kind of canoe is this? Now let us place this scene on our globe and world map. Find the mouth of the Congo River. Is it north or south of the equator? Trace the Congo to its source. Does the equator pass across the Congo anywhere? Yes, two places. If this picture were taken at one of these places where in the sky would these people look for the noonday sun?

Where was this picture taken? What in this picture made you think of Egypt? What kind of palm trees are these? This picture was taken north of the Aswan Dam. Find the sign on the map for the Aswan Dam. Find the Tropic of Cancer. Is this place north or south of the Tropic of Cancer? Where would this shepherd look for the noonday sun? Why? (Because at all places north of the Tropic of Cancer the sun at noon is in the southern sky.)

How many think that they know where this picture was taken? Why? At noon, all the year, where do the people of Holland look for the sun? How do you know? Do they see the sun higher or lower in the sky than the people of Egypt?

Where do you believe this picture belongs? Yes, it might be taken north of the Arctic Circle or south of the Antarctic Circle. What in it makes you think so?

This picture was taken in July, now where is it—north of the Arctic Circle or south of the Antarctic? How long will the longest day be here? (More than twenty-four hours long) The longest night? (More than twenty-four hours) What will happen here in December? (There will be a period of one or more days during which the sun will not appear.)

Here is a picture taken in northern Australia. Find where the Tropic of Capricorn crosses Australia. Would this scene be north or south of the Tropic of Capricorn? If you were lost in this forest, where would you look for the sun? (Most of the year the sun would be in the northern sky, but some of the time it would be in the southern sky.) Do you think this is in a part of Australia where there is much or little rainfall? Why?

This picture was taken south of the Antarctic Circle. Find the Antarctic Circle. What month of the year was this picture taken—June or December? Give a reason for your answer. It is a picture of Amundsen who discovered the South Pole and was taken on December 16, 1911.

In which region we have visited does this picture belong? Why? If the sun appears here every day in the year and no day is twenty-four hours long, is this north or south of the Arctic Circle?

Where on the globe and the world map would you place this picture? Why do you place it in one of the Mediterranean countries? Are the Mediterranean countries north or south of the Tropic of Cancer? Of the Arctic Circle? What does their location tell you about the sun there?

In what land did we visit scenes like this? Why do you suggest Switzerland? Find Switzerland on the map (physical-political of world) and the globe. Is it north or south of the Tropic of Cancer? Of the Arctic Circle? Where do the Swiss people look for the sun at noon? Is the sun as high in the sky as in the Mediterranean Region? As in Norway?

This picture was taken in January. Notice the shadows. From the shadows is the sun high or low in the sky? Is this scene north or south of the equator? Is it north or south of the Tropic of Capricorn? (Probably south) In which part of Australia would it be?

We have had a rapid review of our journeys and have learned how these lines on our map help us. These pictures which we have been looking at do not have any titles; during our study period, let us look at them again and give titles to them. Also take the world maps (desk maps) and place the number of the picture on the map where we believe the picture was taken.

Some New Lands

As we have visited people in various parts of the world, we have caught glimpses of other lands. Also sometimes we have visited only one part of a great land. In every land there are many many things to see and we have seen only a few of the things even in the lands we have visited. On the globe and the map let us find the Congo Region and the land of the Nile. Both of these are parts of a very large mass of land. You remember as we went from the Congo to the Nile we frequently saw land on our right. This land was a part of the same mass

of land. This great mass of land is called the continent of Africa. It would take us many weeks to cross Africa if we started from the mouth of the Congo and went east to the ocean. The ocean east of Africa is the Indian Ocean. After leaving the Congo we would cross high mountains and plains and see many other lakes and rivers.

If we started at the mouth of the Nile and went up the Nile as far as we could and then across lowlands, mountains and high plains, it would be several months before we reached the southern tip of Africa. We would see many different kinds of people doing many different things. (Use a map in this development.)

Find where the equator crosses Africa. You see, part of Africa is north of the equator and part is south. Find the Tropic of Cancer; now the Tropic of Capricorn. Notice where each one crosses Africa. Those lines should tell us something about Africa. What do they tell?

Here is a picture taken on the southern coast of Africa. What are these people doing? Whom do they remind you of? Notice the houses. Where have you seen houses like these? What time of the year do you think it was taken? In what months might it have been taken? Is this part of Africa as hot and rainy as the Congo?

Note: Follow similar exercises with pictures from each of the continents so that the children will have two or three views of each one based upon the variety of regions existing in the given continent.

Review Exercises

1. On your map of the world find the great land mass in which the Congo is located. This is the continent of Africa. Color all of it lightly with a brown pencil. Find where the equator crosses Africa; trace it with your pencil. Find the Tropic of Cancer and the Tropic of Capricorn.

   Study pictures numbered . Put the number of these pictures on the map of Africa where you think they probably were taken. In what month of the year was number 11 taken?

2. From Africa we are going to the great continent of Asia. Color Asia with a purple pencil. Study pictures numbered . Write the number of each picture in that part of Asia where you think each one was taken.

3. The next continent we visit is our own continent of North America. Color it orange on your map.

   Study pictures numbered . Write the number of each picture on the map at the place where it was probably taken.

   What does picture numbered tell you about some parts of northern North America?

   Put a cross on the coast of Labrador. Is there anything in this picture which reminds you of Labrador?

   What have these people in their hands? Of what use are these?

   What does picture numbered tell you about southern North America? Where previously have we seen bananas growing? What will these men probably do with these bananas?

   What does picture numbered tell you about much of middle North America?

   What grain is being harvested? Answer the questions on the back of the picture.

How can you tell that picture numbered is a desert picture? How can people make a living in a desert region? Where else in the world are there deserts?

4. On your map color South America yellow. Find where the equator crosses South America. In what part of South America is it? Find the name of the large river near the equator. What kind of region would you expect to find along the Amazon? Why? What other region have you studied that is similar?

   Pictures numbered were taken in South America. Place the number of each picture about where on the map you think it probably was taken.

5. Color the continent of Europe on your map. Mark with a cross each part of Europe which we have visited.

With these pictures we have had glimpses of some of the lands and people in all of the continents. But remember, these are only samples. There are many other kinds of lands and peoples in each continent. Do not forget the lines on a globe and a map which help us to tell something about places we have not visited.

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FIFTH YEAR

I. General Survey for the Year

A. Regions to Be Studied

In the fifth year a geographic analysis is made of the United States, Canada, and Newfoundland. This English speaking part of North America is divided into regions based mainly upon common work activities. (See outline map, page 71). The analysis of these regions is followed by a consideration of Canada-Newfoundland as a whole, the United States as a whole, and the outlying areas of the United States.

The order in which these regions are studied depends upon the difficulty of the geographic thinking required. The first region studied is, therefore, the one in which simple, one-step geographic relationships are involved. This is followed by those regions in which the geographic relationships are of gradually increasing difficulty.

In the study of each region the pupils will become familiar with the states or provinces included in the region. Thus, they meet every state in the United States and every province in Canada. In order to emphasize the location of each place for which a geographic concept is developed, the pupils, throughout the year's work, are held responsible for accurate map reading and for map making (using chiefly base maps). Each child is held responsible for a geographic understanding of the life situations in the regions studied and for the use of those tools by which the geographic relationships are discovered or emphasized.

The dominant outcomes of the work in this year are an understanding of the geographic relationships and an appreciation of the geographic personality or geography story of the regions for which the pupil has an accurate concrete imagery and an accurate locational concept. Each geographic relationship, as listed in the type unit, includes information for one or more geographic relationships as they will be developed with pupils of the fifth year. While the geographic relationships are not given in the suggestions for each unit, they are to be developed.

The titles of the units * suggested are as follows:

Unit I—Western Interior Highland Region
- A. Grazing and Irrigated Crop Area
- B. Columbia Plateau Wheat Area
- C. Northern Rocky Mountain Forest Area

Unit II—Pacific Region
- A. Northern Lumbering and Fishing Area
- B. California Sub-tropical Farming Area

Unit III—Central Farming Region

Unit IV—Southern Farming Region

Unit V—Appalachian Mining and Manufacturing Region

* The term "unit" is used in these suggestions to indicate blocks of subject matter. In organizing teaching units, teachers may wish to combine a number of these blocks. Experience has shown that the number of distinct units which can be developed adequately in any one year is relatively small.

Unit VI—Middle Atlantic Mixed Farming and Industrial Region
Unit VII—New England-Canadian Maritime Region
Unit VIII—Great Lakes-St. Lawrence Industrial and Commercial Region
Unit IX—Canadian-Newfoundland Hunting, Fishing, and Logging Region
Unit X—Canadian-Alaskan Hunting, Fishing, and Reindeer Grazing Region
Unit XI—Canada as a Whole
Unit XII—United States as a Whole (Continental United States)
Unit XIII—Outlying Areas of the United States and Their Relations to the United States
Unit XIV—The United States, Canada, and Newfoundland: a Summary

B. New Tools to Be Introduced During the Year

As the pupils obtain desired geographic information throughout the year, they become familiar with a variety of new tools. Among these are the following:

1. Books: reference books of wide variety
2. Bulletins: principally those from the United States Department of Agriculture. Others within pupil ability and interest
3. Globe: physical-political and slated
4. Magazines: selected articles of special geographic interest
5. Maps: physical-political, product, seasonal temperature and rainfall, mineral deposits, population
6. Pictures: those in which the relationship between a work activity or other cultural item and the related natural conditions of an area are shown or suggested; those showing cultural items; those showing natural environmental conditions of the area in which the cultural item is pictured Pictures of the first variety are not always obtainable and so it is often necessary to use two pictures in the development of a geographic understanding.
7. Special agencies: government publications as sources of pictures, maps, and word matter
8. Specimens: various products, especially the Cabinet Collection distributed by the Commercial Museum, Philadelphia
9. Statistics: occasional use when pupil interest demands

C. Pupil Activity

Pupil activity, including field trips where practicable, occupies an important place in the development of each fifth year unit. Field trips may serve to introduce a region, to find new information, to verify information gained from other sources, or to measure geographic understandings at the close of a unit. Pupil activity in connection with the work in geography should not be confused with unguided play, "busy work," or the accumulation of facts as ends in themselves. Each activity has definite goals which include:

1. Skill in the use of those tools most helpful in obtaining geographic information
2. Ability to see geographically as in field trips
3. Ability to understand and to appreciate geographic relationships
4. Ability to use geographic understandings in other situations

D. Special Skills, Habits, and Attitudes (See Fifth Year—Type Outcomes, pp. 17-18)

II. Suggestions for Development of Units

Unit I—Western Interior Highland Region

Grazing and Irrigated Crop Area

This area is developed in full in order to suggest procedures for other parts of the units. See page 13.

A. Purpose

1. Understanding of the geographic personality of the area

The dominance of grazing, irrigation, farming, mining, tourist, and health resort activities, together with sparseness of the population and varying standards of living and culture, is, in each case, largely due to one or more of the following factors: scanty rainfall; fertile soil; water supply from streams rising in snow-capped mountains; high altitude; clear, dry air; beautiful scenery of canyons, mountains, geysers, hot springs, lakes, and mountain streams; minerals, such as copper, iron, coal, gold, silver, and lead.

2. Understanding of the major geographic relationships characteristic of the area
   a. The importance of grazing in sections where irrigation is not practiced is explained in part by insufficient rainfall to assure crop production but sufficient rainfall for the growth of grass.
   b. The selection of stream valleys as areas for irrigation farming is explained in part by the level or gently sloping land of the valley floors and the assured water supply from the streams rising in snow-capped mountains.
   c. The raising of fruits, vegetables, sugar beets, and alfalfa as the leading irrigated crops is explained in part by the fertile soil, the nearly level land, and also, the fact that there is an available supply of water from the mountain streams.
   d. The probability that the raising of beef cattle and sheep will continue to be the most important interest of the people of this region is explained in part by the scanty precipitation.
   e. The importance of Denver, Colorado; Salt Lake City, Utah; Boise, Idaho; and Butte, Montana as trade centers is partly explained by the nearness of these cities to valuable mineral deposits and also their location in the valleys or near the mountain passes serving as lowland routes for roads and railroads.

f. The Rocky Mountain forest does not produce large quantities of lumber partly because of the limited amount of precipitation, the importance of these forests as regulators of stream flow, and also the distance from areas suited to dense settlement.

g. The development of health resorts, such as Colorado Springs, Colorado, and Phoenix, Arizona is partly explained by high altitude, much sunshine, dry air, and beautiful scenery of mountain and plateau.

h. Yellowstone and other National Parks are popular summer playgrounds partly because of the unusual scenery of mountains, lakes, waterfalls, rapids, geysers, hot springs, and forests.

i. The large tourist business of Denver and Colorado Springs, Colorado, is partly explained by the beautiful scenery and the invigorating climate of this Rocky Mountain district.

j. Tourists are attracted to the Grand Canyon of the Colorado River partly because of the immensity and grandeur of the canyon.

B. Suggested Activities

1. Approach and development

Pictures, both airplane and ground views, may serve as an approach to the study of this area. These are mounted with the title of each picture placed on the back of the mount and are arranged about the room slightly below the eye level of the majority of the children.

The teacher, referring to the pictures, asks whether or not they look like pictures of places near the school. A group of children study each picture. They decide the pictures were not taken at home. To find the places represented by these pictures, one child in each group looks on the back of the mount and reads the title. These places are located on the wall physical-political map of the United States and then on a similar map in the textbooks. Thus, the general location of the area to be studied is determined.

While the work activities represented in the picture may be studied in any order, the children may, in part because of the number or the general distribution of places represented in the pictures as grazing areas, choose to study this work activity first. In that case, other pictures are, for the time, eliminated and those pertaining to grazing are analyzed. The children find the geographic information shown by these pictures. Questions which cannot be answered from the pictures are listed on the blackboard and become the basis for further study from pictures, maps, and word matter in the textbooks and reference books. Throughout the discussion and other pupil activities, the teacher, by opportune suggestions and questions, guides the thinking and the use of tools as basic sources of information and in so doing leads the children to discover and to appreciate the outstanding

geographic relationships connected with this work activity. The children also gradually acquire knowledge of the location of those important places about which they have developed a geographic understanding.

When studying the food of the people and of the livestock produced in this area, the children become interested in irrigation farming. From pictures, maps (physical-political, seasonal temperature, and rainfall), together with word matter from various sources, they learn about the work of irrigation and its importance to the people of this part of our country as well as to the people throughout the United States and other countries. While making this study, the relationships between irrigation farming and the natural environmental conditions of this area become clear.

Some of the people of this area earn money to buy irrigated crops by working in the mines, so a study of mining may follow the study of irrigation agriculture. By locating, on the maps previously used, the mining scenes shown in the pictures, the children find that the mineral deposits are widely distributed over this area. From pictures, maps, and word matter, they find much valuable geographic information concerning mines, mining, the miners, and their families. They come to realize, to some extent at least, how much these people working below the surface of the land contribute to our comfort and happiness.

While studying the physical-political map of the United States in connection with the various work activities already considered, the children have found some of the national parks. An imaginary trip through one or more of these parks leads into an appreciation of the beautiful scenery of the area and the contribution of the government in making these places permanent playgrounds. On this trip they also become acquainted with some of our national forests and come to realize the relationship between the minor importance of the lumbering industry and value of the forests as regulators of stream flow. The fact that most of the lumber of this area is used largely within the area itself is appreciated when the position of the forests and the general topography of this part of our country is understood.

With the geographic analysis of each work activity, the children become acquainted with the types of homes in which the people live. They note the relationship between building material, architecture, and the natural environmental conditions of the area under consideration.

Throughout the unit, the children, under the skillful guidance of the teacher, grow in the ability to think geographically and thereby into an understanding and appreciation of the adjustments which the people of this area make to the natural environmental conditions under which they live.

Other means of approach leading to differing procedures in the development of this area may include the use of specimens of agricultural or mineral products, scenes

from some of the national parks within the area, or pictures showing the work of irrigation.

2. Culmination

An understanding of the geographic personality of the area may be established in the minds of the children through a game in which each child participates. The children suggest the things which they feel they should remember about the area and hence wish to include in their geography-story. These are listed in two columns on the blackboard. One column includes the cultural items and the other the natural items. Each list of items is condensed as much as practicable and included within the story in such a way as to indicate clearly that the cultural items as a whole largely are accounted for by the natural items as a whole. This becomes the geographic personality of the area, or to the children, the geography-story of the area.

Under the guidance of the geography and the art instructors, the children's mural decorations, illustrating the relationship between the life of the people and the natural environment as seen in the work of grazing, irrigation farming, mining, and caring for tourists, serve to emphasize and later to remind the children of the outstanding geographic relationships of this area and of the interdependence of people. These, together with pictures, samples of products, other class collections, and a brief original dramatization of each work activity, forcefully summarize the major geographic understandings of the area and serve as a pleasing conclusion to the first unit of this year's work in geography. It also illustrates to invited guests some of the means by which children are led into the ability to think geographically—one of the main objectives of present day study of geography.

C. Evidences of Growth

1. Ability to apply learned geographic relationships (indicated in A-2) to life situations and problems

2. Vocabulary concepts

alfalfa
altitude
arid
Butte, Montana
canyon
Colorado river
evaporation
forest reserve
geyser
government land
Grand Canyon National Park
grazing
Grazing and Irrigated Crop Area
hot springs
intensive agriculture
irrigation
latitude
mountain pass
ore
plateau
precipitation
reservoir
Rocky Mts.
scant
semi-arid
smelting
sparse
topography
valley

3. Locational concepts

Butte, Montana
Cascade Mountains
Colorado River
Colorado Springs, Colorado
Denver Colorado
Grand Canyon National Park
Grazing and Irrigated Crop Area
Great Salt Lake
Imperial Valley
Phoenix, Arizona
Pikes Peak
Rocky Mountains
Rocky Mountain National Park
Sierra Nevada Mountains
Yellowstone National Park

4. Specific abilities, habits, and skills

Ability to see the relationship between the dominant work activities, grazing and irrigation farming and the scanty precipitation of the region

Ability to understand the relationship between the development of health resorts in this region and beautiful scenery, high altitude, much sunshine, and dry air

Ability to recognize irrigation farming as shown by pictures

Ability to understand railroad route in relation to river valleys and mountain passes

5. Desirable feelings, attitudes, and appreciations

Appreciation of the ways in which the people of this arid and semi-arid region help to provide food, clothing, and minerals for the people of the United States and other countries

Realization of the advantages of those who live in a region having sufficient water supply for crop production

Appreciation of the wise adjustment to sunshine, dry air, and beautiful scenery on the part of those responsible for the establishment of health resorts in this region

Appreciation of the importance of rich mineral deposits as related to development of this area

Desire to visit the Grand Canyon of the Colorado, the Yellowstone, Yosemite, and Rocky Mountain National Parks as well as other places of scenic beauty in this region

D. Suggestions for Test

Games or formal tests measure geographic understandings and ability in the use of tools (pictures and maps) at opportune times throughout the work of the unit. The following suggest some of the ways of measuring geographic understandings at the close of the unit. These include picture, map, and other types of tests.

1. Pictures

From a group of pictures, select those showing some interest or interests of the people of this area. Arrange these in groups so that each group of pictures shows a particular human interest or work activity.

Ask the following questions: In which of these groups are the work activities of the people explained in part by enough

rain for grass but not enough rain for farm crops? By valleys and snow-fed streams? By minerals in the ground? By beautiful scenery?

(Directions are given orally, one step at a time. This may take the form of a game.)

Children select and arrange pictures to show what they would see while crossing this area from east to west; from north to south.

Pictures representing the characteristic work of the various activities of the area are selected by the teacher, numbered, and arranged about the room. On an outline map of the United States the children write the number of each picture in the place where that picture may have been taken.

Choose from pictures of the following places two playgrounds, three mining towns, two health resorts, two irrigation centers and three trade centers:

Anaconda	Grand Canyon of the Colorado River
Boise	Leadville
Butte	Phoenix
Colorado Springs	Salt Lake City
Denver	Yellowstone National Park

Four or five lantern slides showing points of scenic interest are thrown on the screen. As each picture is shown, the children write the name of the place in which this view is located.

2. Maps

On an outline map of the United States, locate by dot and print the name of each of the above places.

Make a list of five minerals found in this area. On an outline map of the United States write the name of each mineral in the district where it is found.

On a desk outline map of the United States write the number of each of the following in its proper position:

a. Grand Canyon of the Colorado River
b. Yellowstone National Park
c. Rocky Mountains
d. Phoenix, Arizona
e. Denver, Colorado

3. Choice

Draw a line under a word in each of the following parentheses to make each statement correct:

Phoenix, Arizona is a health resort partly because it has (much or little) sunshine and (much or little) precipitation.

Yellowstone National Park is farther (north or south) than the Grand Canyon of the Colorado River.

In traveling along the Colorado River from the Grand Canyon to the Imperial Valley, one travels (upstream or downstream).

4. Completion

Most of the dances of the Hopi Indians are prayers for rain partly because .....

5. Essay

Write two reasons why you should like to visit the Grand Canyon of the Colorado River; the Yellowstone National Park.

Columbia Plateau Wheat Area

A. Purpose

1. Understanding of the geographic personality of the area

The dominance of crop production (principally wheat without irrigation and fruits and hay with irrigation), lumbering, mining, and grazing, together with slight increase in population and high standards of living and culture are largely accounted for by fertile, lava soil; little summer precipitation; snow-fed streams in large valleys; varied mineral deposits; and rugged topography of surrounding areas.

2. Understanding of the major geographic relationships characteristic of the area

B. Suggested Activities

1. Approach and development

A lantern slide showing a combined harvester and thresher at work during wheat harvest may introduce the children to this area. Here instead of sheaves of wheat as left by the harvester in Pennsylvania are bags of wheat ready for shipment left by the great combine. The story of harvesting wheat as told by the picture probably will interest children of Pennsylvania and lead to a series of interesting discoveries about the life and work of the people and the related natural conditions of this Columbia Plateau Area.

Pupil activities or enterprises leading to discovery of geographic relationships characteristics of this area call for the use of globe, population, physical-political, soil, and seasonal temperature and rainfall maps; and pictures and samples of various products.

Other interesting avenues of approach may be

A picture of one of the irrigated valleys with its large number of fruit trees

The label from a crate of apples raised in this area

A visit to a Pennsylvania fruit market where apples from this area are on sale

Product map of the United States showing wheat producing areas

General production map of this area

2. Culmination

A series of short talks (one or two minutes) by children representing property owners from different parts of the

area may serve to show their concepts of the general life of the people and some of the ways in which natural conditions help to explain the interest in various work activities. Besides serving to determine accuracy of concrete imagery of the area, this serves also to emphasize outstanding geographic relationships. A game to try to describe the area without naming it, aids in the development of ability to assemble and to appreciate the geographic personality or the geography-story of the area.

Northern Rocky Mountain Forest Area

A. Purpose

1. Understanding of the geographic personality of the area. The importance of mining and caring for summer tourists, the limitation of agriculture to the valleys and of lumbering to the western slopes of the mountains, the sparseness of population, the limited interests of the people of the central and the northern parts of the area, and the high standards of living and culture of the people living in the southern part of the area are largely accounted for by the mineral deposits, the beautiful scenery, the rugged topography, the limitation of fertile soil to valley floors and of forests to the windward side of the mountains, and the continental climate with short summers.

2. Understanding of the major geographic relationships characteristic of the area

B. Suggested Activities

1. Approach and development

   Since mining and caring for tourists are dominant activities, samples of minerals (gold, silver, copper, lead, zinc, and coal) or pictures showing tourist attractions may serve as an approach to this area. A suggested activity which involves the use of many tools and offers large opportunity for geographic thinking is a trip across this area from south to north. A series of clocks on which are indicated the length of the longest day at each of the stop-overs on the trip is a graphic way of emphasizing the relationship between latitude and daylight periods. These clocks may be placed on a wall outline map of North America or attached to the side of the map with lines extending from each clock to the latitude where length of day indicated occurs. This should establish correct understandings concerning gradual increase of length of day with increase in the distance from the equator.

2. Culmination

   Games or tests which include use of pictures and maps measure understanding of geographic relationships and appreciation of geographic personality.

   At the close of the unit, emphasis is given to the common characteristics of the three areas (integrating points of the

unit) to give a concrete imagery of the entire Western Interior Highland Region. This may be accomplished by one of the following activities:

1. With the help of the art instructor, pupils make rural decorations illustrating the life activities and natural environment of the region.
2. Pupils make an original dramatization of each work activity found in this region.
3. Pupils, in group discussion, solve the problem (or one similar) "Why have many people wanted to move West?" Some hint of the next region for study is given in all these activities, especially in that of the problem discussion.

Unit II—Pacific Region

Northern Lumbering and Fishing Area

A. Purpose

1. Understanding of the geographic personality of the area

   The dominance of forest industries, salmon fishing, specialized agriculture, manufacturing, commerce, and caring for tourists together with the rapid growth of population and the high standards of living and culture is largely explained by magnificent forests, great schools of salmon, cool summers and mild winters, well distributed precipitation, rugged topography with level-floored valleys, excellent harbors, and beautiful scenery.

2. Understanding of the major geographic relationships characteristic of the area

B. Suggested Activities

1. Approach and development

   An informal discussion about the value of trees drawn from the children's present knowledge may serve as the first step in the development of this area. This may be followed by the consideration of a number of pictures. At a point in the room where all may see there may be placed a large poster bearing, at the top, a scene typical of this forest area. Below the picture are the words, "Mine or Crop," under which is an interrogation point. The idea of forests being considered from the standpoint of either a mine or a crop is perhaps new to the children. A lively discussion follows in which various types of geographic information are found necessary.

   Interesting items or pictures of any characteristic human activity or outstanding condition of the natural environment may serve as a means of stimulating interest in this area quite as satisfactorily as the above suggestion; for example, blue fox farming in Alaska; salmon fishing; national park picture or pictures.

   Pictures, globe, maps (forest, physical-political, seasonal temperature and rainfall, and population), as well as books and other sources of information are needed. The contribution of ocean, wind, and mountain range to forest growth,

together with many geographic relationships are discovered. The children come to a new realization of the value of forests to people, the importance of forest conservation, and their part in caring for trees.

The problem of providing food for the people living in lumbering centers leads to the study of foods supplied in this area and the degree of dependence upon other areas for food. As the work of the unit progresses, analysis of other work activities and general standards of living and culture naturally follows until finally the outstanding geographic relationships are discovered and understood and the geographic personality is developed.

2. Culmination

Games or formal tests include the use of pictures, maps, and other tools used in the development of the unit.

California Sub-tropical Farming Area

A. Purpose

1. Understanding of the geographic personality of the area

The outstanding work activities: raising crops by irrigation, drying of fruits in the sun, mining petroleum, caring for tourists, and taking motion pictures, together with the health and energy of the people and their high standards of living and culture are largely due to the long summers with clear, sunny skies; the short, rainy winters; the plentiful water supply from streams rising in the snow-capped mountains; the rich deposits of petroleum; and the beautiful scenery of seashore, mountain, deep valley, and desert.

2. Understanding of the major geographic relationships characteristic of the area

B. Suggested Activities

1. Approach and development

A box or advertisement of raisins, prunes, or other sun dried fruits may introduce the children to a characteristic work activity of this area. Since production of dried fruits is but one phase of the great fruit industry, the production of fresh fruits, both citrus and deciduous, is also considered.

The geographic analysis of the fruit industry leads into an appreciation of how assured water supply for irrigation, winter rain-bearing winds, long, dry summers, and other natural items help the fruit producers and of how lowland routes for railways, petroleum for locomotives, and other items of importance in transportation help the shippers. Short original talks by the children taking the parts of producers and shippers serve to establish geographic understandings. Other regions in the world similar in climate, such as the Mediterranean Region, may be recalled from the work of the previous year.

Other interests, such as the petroleum industry, the caring

for tourists, the production of motion pictures, follow in natural sequences and contribute to the final child development of the regional geographic personality.

Other suggestions by which the unit may be introduced:

Airplane views which may include coastal or inland scenes (These are particularly interesting and provocative of much geographic thinking.)

Story of the motion picture industry

Postcards or other pictures of scenes in Hollywood

A scene showing an irrigated district and one that is not irrigated

2. Culmination

Tests or other checking devices should measure attainment in geographic thinking as well as skill in the use of those tools, particularly pictures and maps, by which geographic information is obtained or verified.

An interesting exhibit shows our dependence upon this area. By skillful organization of material, the children demonstrate their understanding of the geographic personality of the region and their skill in the use of tools.

Unit III—Central Farming Region

A. Purpose of the Unit

1. Understanding of the geographic personality of the region

Largely due to the wise adjustments of an energetic people to characteristic natural environmental conditions of fertile soil, level or gently rolling land, well distributed precipitation, abundance of coal and water power, natural land routes, and healthful climate, this region has become one of evenly distributed population with high standards of living and culture and one of the greatest food producing regions of the world.

2. Understanding of the major geographic relationships characteristic of the region

B. Suggested Activities

On a blackboard or a wall outline map of North America the general position of the Central Farming Region is delineated by means of an accepted symbol appropriately placed in each state and province within this region. From a physical-political map in the textbook, each child finds that this is a rather level region with somewhat evenly distributed, medium-sized cities and also, that no part of this region touches an ocean.

Seasonal temperature and rainfall maps tell about the length of the growing season as well as temperature and rainfall conditions. From information concerning the natural conditions of the region as read from these maps, the children conclude that the people of this area are likely to be interested in farming. The accuracy of their judgment is verified by information read from a series of United States agricultural production maps.

In finding the main reasons which help to explain why this area is a great food producing region, the pupils analyze each important way of furnishing food for people and for livestock. This analysis leads to a consideration of other interests of the people of this region. Throughout the unit, emphasis, as usual, is placed upon a clear understanding of the major geographic relationships as well as upon the use of those tools by which needed geographic information is obtained.

Unit IV—Southern Farming Region

A. Purpose of the Unit

1. Understanding of the geographic personality of the region

   Through varied interests characterized by mixed and specialized farming, manufacturing, commerce, mining, forest industries, caring for tourists, the development of inland manufacturing centers and coastal manufacturing and commercial centers, a somewhat evenly distributed population, though differing in race and standards of living and culture, have shown their ability to make wise adjustments to such natural environmental situations as a humid growing season of from six or seven to twelve months; soils of both high and low fertility; generally low topography; large deposits of petroleum, sulphur, and phosphate rock; valuable forests; natural lowland routes; good harbors; and beautiful scenery.

2. Understanding of the major geographic relationships characteristic of the region

B. Suggested Activities

1. Approach and development

   The stimulation of interest in this region may be affected by a trip to a market where early fruits and vegetables from this region are on sale. Careful planning and setting up of definite geographic objectives precede the actual trip and are essential to its success. During class discussion following the trip, important geographic observations are analyzed and questions arising during the trip and requiring further study are considered. The geographic analysis of other interests of the people of this region follow in natural sequence. These include the production of cotton and other agricultural products, the forest industry, manufacturing, fishing, mining, and quarrying as well as delta city problems and general standards of living and culture. Pictures, globe, maps (product, physical-political, soil, seasonal temperature and rainfall, blackboard, wall and desk outline) together with various books and other reference materials are among the sources of information employed by the pupils in the geographic analysis of this region. Other pupil activities, contributing to the discovery and understanding of important geographic relationships and the core thought applicable to this region, may include a schoolroom moving

picture showing the complete story of cotton in the United States or a series of pictures mounted and used in the study of this region. These are filed for future reference.

2. Culmination

One means of demonstrating geographic understandings, as well as the value of those understandings in successful cooperation, is by dramatizing the "Early Fruit and Vegetable Company." This takes the form of an original play. The class is divided into three groups. One group represents fruit and vegetable market owners of Pennsylvania; another group takes the part of the southern land-owners supplying these products, while the third group is concerned with transportation and other interests related to the production, sale, and delivery of early fruits and vegetables. Throughout the presentation, the ability to think geographically is shown and the understanding of major geography relationships is evidenced. The interrelationship of different regions of our country is also demonstrated.

Unit V—Appalachian Mining and Manufacturing Region

A. Purpose of the Unit

1. Understanding of the geographic personality of the region

In the Appalachian Region, the dominance of manufacturing, mining, and agriculture, the popularity of summer playgrounds, the uneven distribution of population, and the variety in standards of living and culture are largely accounted for by abundance of high grade anthracite and bituminous coal; rich deposits of petroleum, limestone, and other minerals and building stones; numerous valleys; growing season of five or six months; sufficient precipitation for crop production; changeable weather; and beautiful scenery.

2. Understanding of the major geographic relationships characteristic of the region

B. Suggested Activities

1. Approach and development

Since the greater part of Pennsylvania is included within this region, to most of the schools of the State, there is at hand, the ideal means of introducing this unit. This is by actual observation. The study of the local district as largely as possible by means of field trips, supplemented by the use of various sources of information (pictures, maps, word matter), to find the answers to questions suggested by observation but the solution of which may not be seen in the field, contributes to the development of the following vital and far reaching abilities:

a. To see and to think geographically

While in the field, by skillful guidance, the children observe the cultural items and the natural items and then see the relationship between the cultural items of the landscape and the natural environmental layout

b. To think geographically

So many and varied are the interests of the people of this region and so important are the contributions to others, that opportunities for solution of problems and other activities within the ability of children of the fifth year seem almost innumerable. Both individual and group classroom activities together with a number of field trips serve to focus interest upon Pennsylvania while vicarious trips and other types of activities aid in clarifying geographic understandings of parts of the region too far away to be actually visited.

To emphasize geographic understandings, sections having similar work activities may be compared or contrasted. For example, one child may represent an anthracite coal miner while another child may represent a bituminous coal miner. Each shows samples of coal and pictures characteristic of the mining district in which he is interested, tells how this coal helps others, and gives some of the problems of mining. Insofar as he is able, he analyzes these situations from the standpoint of geographic relationships.

A child representing a resident of the Pittsburgh District of Pennsylvania may give a number of reasons which help to explain why Pittsburgh is the center of the greatest iron and steel manufacturing district. To make the presentation more interesting and helpful, he shows samples of necessary raw materials and, with the aid of pictures and maps, gives a vivid geographic presentation of the iron and steel situation in this district. A child representing a resident of Birmingham, Alabama, with similar tools, accounts in part for the development of the "Pittsburgh of the South."

A geographic comparison of the educational advantages of the average child of Pennsylvania with those of the more isolated districts of Pennsylvania leads to an understanding of the relationship between the problems of a people and the natural environmental conditions to which adjustments are made. This comparison may be made with children in Kentucky and Virginia.

The work of this unit is not complete until the children are led into an appreciation of the beautiful scenery and the attendant recreational opportunities within this region and especially within our own State.

2. Culmination

Exhibit of natural resources (samples and pictures) with lines drawn from resources to producing area or areas shown on wall outline map. Explanation by children who act as guides

Poster exhibit showing ways in which the people of this region help others

A vacation in the Appalachian Region of the United States

Unit VI—Middle Atlantic Mixed Farming Region

A. Purpose of the Unit

1. Understanding of the geographic personality of the region

The characteristic work activities—general and specialized agriculture, manufacturing, and commerce, the many large cities, and the high standards of living and culture are largely explained by level or gently sloping land; variety of soils, all of which require fertilization for crop production; warm summers and mild winters; ample, dependable precipitation, nearly ideal for a thriving agriculture; presence of lowland routes connecting this with other regions rich in natural resources and excellent harbors.

2. Understanding of the major geographic relationships characteristic of the region

B. Suggested Activities

1. Approach and development

For the schools of Pennsylvania which are within this region, interest may be stimulated by a field trip. Because of their importance, as many trips as possible should be taken during the analysis of this region (See Unit V).

The general area included within this region may be indicated in a blackboard outline map of the United States. Children refer to a physical-political map in their textbooks to verify the location and to find which states or parts of states are included within this small region.

Any one of a number of questions asked by the children as they consider the name of this region and the items of interest shown on the physical-political map may serve as the first problem to be solved. The children may ask such questions as:

How does this come to be called a farming region where there are so many cities and towns so close together?

Why are there so many large cities within so small an area?

How do the people in these cities and towns earn a living?

Should the second problem be chosen for first solution, the children may see the value of choosing one city and after its geographic analysis, comparing others with it. They may list the things the people of Philadelphia need, such as food, clothing, shelter, work, tools, and transportation facilities for exchange of products. As the children study each of these needs, the local district is surveyed first and then the outlying areas are considered.

At least New York and Baltimore should be compared with Philadelphia. Finding why New York is larger than Philadelphia leads to interesting geographic understandings.

During this study the children may use the bar graph to represent population statistics. After they make the graph they interpret it geographically. This justifies its use.

2. Culmination

A food show, a style show, or a building supply exhibit are among the numerous activities by which the work of the unit may be summarized.

Unit VII—New England-Canadian Maritime Region

A. Purpose of the Unit

1. Understanding of the geographic personality of the region

Importance of manufacturing, commerce, fishing, forest industries, quarrying, specialized agriculture, and tourist industry, the uneven distribution of population with greatest density in valleys and coastal areas, and the general high standards of living and culture are largely explained by the modified continental climate; both low and high, and low and rugged topography, numerous waterfalls, rapids, and lakes; coniferous forests; thin stormy soil (except in valleys); many excellent harbors and beautiful scenery of mountains, lakes, and seashore.

2. Understanding of the major geographic relationships characteristic of the region

B. Suggested Activities

1. Approach and development

An advertisement of an important product of this region interests the children and arouses a desire to know more about this part of North America. From newspapers and magazines in the homes, they find advertisements of a variety of products produced in this region. They bring these to school and organize them to show the types of work activities common to this area. They find the people interested in manufacturing, commerce, fishing, quarrying, fox-farming, fruit raising, dairying, truck farming, and caring for tourists. The advertisements seem to indicate that many kinds of small products are made in this region. After referring to the textbook to verify this finding, the children may choose as their first problem:

Why are the people of this region interested in manufacturing many small products?

They find this a more complex problem than those previously analyzed. They learn that the size of the manufactured article is closely related to the advantage of an early start and of skilled labor as well as to the lack of coal and iron ore and the limited developed hydro-electric power. The early start and the skilled labor are closely related to the good harbors and to the position of this part of North America on the side of the continent opposite Europe. These as well as other geographic relationships are discovered by the children.

Geographic analyses of other work activities follow in natural sequence.

2. Culmination

Throughout the unit the children recognize geographic relationships and by their ability to assemble the geography story or the geographical personality of the region prove their ability to think geographically.

Unit VIII—Great Lakes—St. Lawrence Industrial and Commercial Region

A. Purpose of the Unit

1. Understanding of the geographic personality of the region

In the Great Lakes-St. Lawrence River Basin, the importance of specialized agriculture, manufacturing, and commerce, the dense population, the many large cities, and the general complex standards of living and culture are largely explained by smooth, level land; fertile soil; long growing season; well distributed rainfall; nearness of important mineral deposits and of rich forests and natural lowland routes along valleys and plains.

2. Understanding of the major geographic relationships characteristic of the region

B. Suggested Activities

1. Approach and development

The children, by the time this region is reached, have become quite skillful in reading definite geographic information from a map or a number of maps. Here opportunity is given them to find the story of a new region as told by a physical-political map. With this map as the only tool they find all they can about this region. Cities, canals, waterfalls, rivers, land gently sloping toward the Great Lakes and the St. Lawrence River with a general slope of entire area toward the Gulf of St. Lawrence, water routes to the Gulf of St. Lawrence and to New York, lowland routes for railway lines, and importance of commerce are among the items read from the map and woven into a geographic description of the region. Many questions arise which this map does not answer. These are now answered as far as possible from geographic understandings resulting from former studies or from living within this area. A large number of important geographic relationships contributing to the development of the geographic personality have thus been discovered by the children. They also have been given opportunity to apply previously discovered geographic knowledge to new situations and problems and to test their own skill in the use of the physical-political map.

Other activities during the development of the unit may relate to such topics as

Fruit growing in the lake plain of Pennsylvania (for schools of this district, a survey based upon actual observation)

A lake trip
A visit to Niagara Falls
The meat packing district of Chicago
An open pit iron ore mine of the Mesabi Range
Educational opportunities
Out-of-door recreation in Chicago

2. Culmination

A classroom or assembly program is a fitting final activity. An airplane trip from Duluth to Gulf of St. Lawrence presents many possibilities for child activity by means of which geographic understandings are evidenced. To do this, a large physical-political map of this region may be made by the children. This is probably made in sections and assembled for final presentation. Should a pantograph be available, it may be used in the enlargement of maps. Other tools used in presentation include airplane views, ground views, and large scale maps. Various children are responsible for the speaking parts. They so present the life of the people of this area that those observing may clearly see and feel the adjustments to natural conditions made by the people in both work and play. They also realize the keen appreciation of the children for the contributions of the people of this region to those of Pennsylvania and other regions. The value of the study of geography to the development of desired attitudes and appreciations is unconsciously demonstrated by the children.

Unit IX—Canadian-Newfoundland Hunting, Fishing, and Logging Region

A. Purpose of the Unit

1. Understanding of the geographic personality of the region

The dominance of trapping and fur trading throughout most of the region, of fishing along the eastern coast, of farming in the valleys, and of logging in the southern section, together with the sparse population, and the different standards of living and culture are largely explained by vast coniferous forests and brush; fur bearing animals; fishing grounds along the eastern coast; continental climate having short summers and long, severe winters; and thin, stony soil.

B. Suggested Activities

1. Approach and development

Disconcerting data may serve as a means of stimulating interest in this region. The following facts may be used:

Between Seattle and Sitka is a part of the greatest forest region in North America. The average January temperature of Seattle over a period of thirty-one years is 3°, and of Sitka over a period of thirty-nine years is 4°. In Newfoundland and Labrador, in the same latitude as the Seattle-Sitka area, the forests are much less important. The crops of Newfoundland are limited to the more hardy types. In

Labrador it is too cold for crops and the only industry of interest is fishing. The children see the need of accounting for these differences in vegetation, temperature, and work activities.

To find this information, the pupils refer to a physical-political map of the region. The relationship between winds, ocean, ocean currents, and temperature of this region may be explained here.

The pupils find all they can about the life of the people of this region and their adjustments to natural conditions. They read from various texts and reference books about the work of fishing in these waters as well as about the life of the Indian hunters and trappers living in this forest region. They become better acquainted with the people of this part of our continent through such stories as Kipling's, "Captains Courageous" (for children who read well) and Grenfell's, "Adrift on an Ice Pan."

2. Culmination

Choosing from a group of pictures those representative of this region and then reading the cultural and natural items shown in these pictures may be followed by matching these cultural and natural items to form geographic relationships characteristic of the region. This offers an interesting way by which the children are guided into the ability to think geographically.

Unit X—Canadian—Alaskan Hunting, Fishing, and Grazing Region

A. Purpose of the Unit

1. An understanding of the geographic personality of the region

The dominance of hunting, fishing, and reindeer grazing; the importance of animal products in connection with food, clothing, shelter, and transportation; the sparse population; and the low standards of living and culture are largely accounted for by the presence of land and water animal life, the tundra vegetation, a summer season too short for most agricultural crops, and a long severe winter.

2. An understanding of the major geographic relationships characteristic of the region

B. Suggested Activities

A picture of an Eskimo in native costume may be the medium by which interest in this unit is aroused. The children apply geographic understandings gained in the previous year's work and analyze the clothing of the Eskimo in terms of adjustments to natural conditions. By reading geographic information from pictures, maps, and word matter, the pupils enlarge their fund of geographic understandings concerning the people of this region. The reindeer industry claims particular consideration.

Unit XI—Canada as a Whole (Canada and Newfoundland)

A. Purpose of the Unit

1. Understanding of the geographic personality of Canada and Newfoundland

   The dominance in Canada and Newfoundland of specialized agriculture, manufacturing, lumbering, mining, fishing, trapping, and commerce; the sparse population; and the general high standards of living and culture are explained in large part by variety of climate, topography, and soil; abundant water power; extensive forests; irregular coast line; and position with reference to densely populated regions.

2. Understanding of the major geographic relationships characteristic of Canada and Newfoundland

B. Suggested Activities

1. Approach and development

   From what they have learned during regional studies, the pupils now analyze the Canadian-Newfoundland section of an agricultural region map of North America. A land utilization or a product map of Canada may be analyzed if preferred. In any case, the analysis shows an understanding of the relationship between cultural items and the various natural environmental conditions of respective regions. As evidence of an accurate concrete imagery of both cultural and natural features of Canadian landscape, the pupils may choose from a group of pictures, those representing Canadian life as related to natural environment. They then indicate on an outline map of Canada or North America the areas represented by pictures. Throughout this unit the pupils show their ability to think geographically with relation to Canadian life.

2. Culmination

   The unit may close with a pupil presentation emphasizing the interdependence of the United States and Canada and the geographic relationships contributing to that interdependence.

Unit XII—The United States as a Whole (Continental United States)

A. Purpose of the Unit

1. Understanding of the geographic personality of the United States

   Diversified work activities as agriculture, manufacturing, commerce, mining, lumbering, fishing; excellent transportation and communication facilities; varying density of population; healthy, energetic people with so-called high standards of living and culture are explained in large measure by large area, rich and varied natural resources,

invigorating climate, excellent lowland and inland water routes, many good harbors, and easy accessibility to the great producing regions of the world.

2. Understanding of the major geographic relationships characteristic of the United States

B. Suggested Activities

A population map of the United States presents new problems and hence stimulates the interests of the children.

In accounting for the dense, sparse, even, and uneven distribution of population, the various work activities of the people are recalled and analyzed from the standpoint of geographic relationships. This offers opportunity for the evaluation of the previous work from the viewpoint of the pupil's understanding and appreciation of the adjustments which the people of the United States make to conditions of the natural environment.

This unit is valuable in that it gives the pupils a view of the United States, not as made up of separate regions but as a unified whole in which the people live under differing natural environment conditions. However, their interests are so interwoven that each section of the United States depends to a considerable degree upon every other region of the country. Interdependence, partly because of differing natural environments, is the keynote of this unit.

Unit XIII—Outlying Areas of the United States and Their Relations to the United States

Alaska

A. Purpose

1. Understanding of the geographic personality of Alaska

The importance of fishing and forest industries, seal and blue fox farming, mining, trapping, fur trading, subsistence agriculture, reindeer grazing, and caring for tourists, the sparse population, and the varying standards of living and culture are largely explained by varieties of climate (marine, continental, sub-polar and high altitude), fertile soil in valleys, fiorded coast, good harbors, coniferous forests, great schools of salmon, mineral deposits, isolated islands, and tundra.

2. Understanding of major geographic relationships characteristic of Alaska

B. Suggested Activities

1. Approach and development

A scene from the "Inside Passage" of Alaska may serve to stimulate interest in the study of this outlying area of the United States. An imaginary "Inside Passage" trip offers many opportunities for geographic interpretation. Not only do the pupils appreciate the beauty of this type of

scenery but they are also conscious of the adjustments to the changing length of daylight periods as they travel northward.

From Skagway, the pupils visit the Aleutian and the Pribilof Islands, Nome, the reindeer grazing, the central farming and mining, and the coastal industrial areas. The return trip is made by way of the "Inside Passage" but at a different time of year from the northward trip. The pupils note the differences in the adjustments to the length of day and the height of the noonday sun on the trip southward as compared with their northbound trip.

2. Culmination

After the trip, the pupils select from a group of pictures those representative of the parts of Alaska visited. They indicate on wall or blackboard outline map where each picture may have been taken. The description of the trip as given by the pupils and their conclusions concerning the interdependence of the United States and Alaska indicate their ability to think and to see geographically.

Hawaiian Islands

A. Purpose

1. Understanding of the geographic personality of the Hawaiian Islands

The importance of sugar cane and pineapple growing, the limitation of manufacturing largely to the refining of sugar, the canning of pineapple and other manufactures requiring local agricultural products, the importance of commerce and the tourist business, the different nationalities and races of people, the varying standards of living and culture are largely explained by twelve months growing season with warm winters and mild summers; abundant and scanty precipitation; assured water supply from streams on windward side of mountains for irrigation where needed; fertile lava and alluvial soils; low and rugged topography; meager mineral resources; limited water power; good harbors; beautiful scenery of ocean and mountain; and location with reference to Asia and United States.

2. Understanding of major geographic relationships characteristic of the Hawaiian Islands

B. Suggested Activities

A can of Hawaiian pineapples or the wrapper from such a can may (in lieu of a fresh pineapple) be selected as a means of introducing the study of the Hawaiian Islands. The pupils are encouraged to tell what they know about the Hawaiian pineapple industry. This informal discussion arouses questions which cannot be answered by members of the class. These are organized and become the basis for the study of these islands. To find the answers to their questions, the pupils plan a visit to the Hawaiian Islands.

While vicariously touring these islands, they become acquainted with the people and with their work and play. They see in both work and play interesting adjustments to the natural environment. They collect pictures of geographic value showing characteristic interests of the people and the principal attraction stimulating the tourist industry.

As a result of the trip, the pupils understand many of the adjustments to the natural environment made by the people of Hawaiian Islands. They also appreciate the interdependence of the United States and the Hawaiian Islands largely because they are able to think geographically. By means of games or more formal tests, the understanding of characteristic geographic relationships pertaining to the Hawaiian Islands are measured.

Pictures of geographic value pertaining to the Hawaiian Islands and a map showing the "Cross Roads of the Pacific" are among other mediums of approach to the study of this outlying area of the United States.

Other Outlying Areas of the United States

A. Purpose

1. Understanding of major geographic relationships characteristic of these areas

Philippine Islands

The raising of rice, tropical fruits, coconuts, sugar cane, Manila hemp, and tobacco is explained in part by the level coastal plains and river valleys; the fertile soil; and the hot, wet climate. The Philippine Islands export sugar, hemp, copra, coconut oil, and cigars to the United States partly because of sufficient level land for agriculture; a hot, wet climate; fertile soil; and the position of these islands with reference to the United States.

Other major geographic relationships may pertain to the growth of Manila, the steep-roofed houses, the different races, languages, and standards of living.

Guam and Other Small Pacific Islands

The principal value of Guam and other small Pacific Islands is that of radio, cable, naval, and fueling bases partly because of the limited area and the position of each in the Pacific Ocean.

Puerto Rico

Sugar cane and tobacco are the chief plantation crops of Puerto Rico partly because of the level or gently sloping land, the twelve month growing season, the abundant precipitation on the eastern side of the mountains, water supply for necessary irrigation, and the fertile soil.

That Puerto Rico sends sugar and tobacco to the United States is explained in part by the suitability of the natural conditions in Puerto Rico for growing these crops and its position with reference to the United States.

Panama Canal Zone

The location of the Panama Canal is partly explained by varying widths of the Isthmus of Panama and the location of valleys, streams, lakes, and mountains in the Panama Canal Zone.

The Panama Canal shortens the water route distance between Atlantic and Pacific ports because it eliminates the distance around South America.

The Virgin Islands

The chief value of the Virgin Islands to the United States is as a radio, cable, naval, and fueling bases in part because limited area of these islands and their position in the Atlantic Ocean near the Panama Canal Zone.

B. Suggested Activities

The pupils refer to their textbooks or reference books to find the names of our outlying areas other than Alaska and the Hawaiian Islands. A game to find these areas stimulates interest and leads to further study. The pupil who first finds one of these outlying areas is privileged to indicate its location on the world physical-political wall map.

From physical-political and seasonal temperatures and rainfall maps, the pupils suggest what they would expect to find the people of each area doing to earn a living. They verify the accuracy of their judgments by referring to pictures, other maps, text and reference books. Questions arise which lead to a study of each of these outlying areas. During these studies, a wide variety of tools of geographic value are used in order that the major geographic relationships and the interdependence of the United States and these outlying areas may be clearly understood and appreciated.

Through the use of maps, pictures, games, and tests, the major geographic understanding of each outlying area is measured.

Unit XIV—The United States, Canada, and Newfoundland: A Summary

Suggestions for presentation of geographic understandings realized during the fifth year work

A pageant or a play offers varied opportunities for both individual and group expression of those geographic understandings and appreciations which are among the outcomes of the year's work.

An exhibit including pictures, specimens, distribution maps (production areas indicated on base maps by pupils), as well as various types of products, serves to illustrate the characteristic interests of the people throughout the regions studied. Posters and other mediums of explanation emphasize the relationship of these interests to the natural environmental layout of the region involved. This exhibit is made by the pupils guided by the teacher.

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- Department of Forests and Waters
- Department of Highways
- Department of Internal Affairs, Topographic and Geologic Survey
- Public Service Commission

United States (Write for list of publications)
- Department of Agriculture
- Department of Commerce

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** Books for the teacher.

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C. Globes

Physical-political
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E. MAPS (Wall)

North America
- Physical-political
- Slated wall outline

United States
- Annual rainfall
- Daily weather
- Physical-political
- Population
- Production (Various maps showing producing areas)
- Slated wall outline

World
- Rainfall (Seasonal)
- Temperature (Seasonal)

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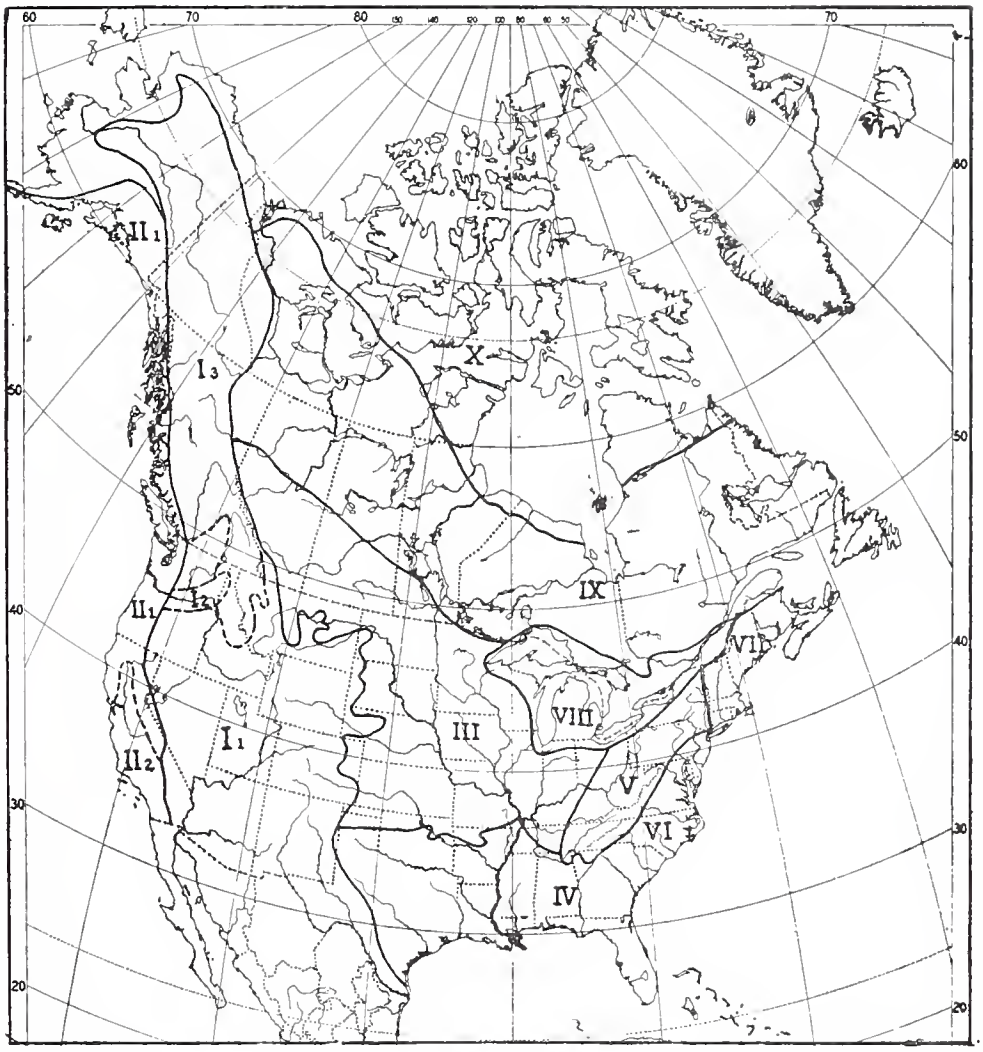
G. SPECIAL AGENCIES

Mary Josephine Booth, Material in Geography which may be obtained free or at small cost. (Mary Josephine Booth, Eastern Illinois State Teachers College, Charleston, Illinois)
For Visual Aids see page 175

Regional Divisions of United States and Canada for the Fifth Year Geography



Superimposed on The Ridgley Outline Map of North America, McKnight & McKnight

Key for Map

I. Western Interior Highland Region
   1. Grazing and Irrigated Crop Area
   2. Columbia Plateau Wheat Area
   3. Northern Rocky Mountain Forest Area

II. Pacific Region
   1. Northern Lumbering and Fishing Area
   2. California Sub-tropical Farming Area

III. Central Farming Region

IV. Southern Farming Region

V. Appalachian Mining and Manufacturing Region

VI. Middle Atlantic Mixed Farming and Industrial Region

VII. New England-Canadian Maritime Region

VIII. Great Lakes—St. Lawrence Industrial and Commercial Region

IX. Canadian—Newfoundland Hunting, Fishing, and Logging Region

X. Canadian—Alaskan Hunting, Fishing, and Reindeer Grazing Region

SIXTH YEAR

I. General Survey for the Year

The work of the sixth year consists of the nations of Europe and their respective outlying areas, and the British Isles. In the earlier years, human-use regions have been studied. At this level the children are ready to go beyond the study of separate human-use regions into the study of country personalities (See page 7). The country personality is a composite of the various human-use regions of the country, and provides an opportunity of seeing the interdependence of the various areas of the country, as well as the interdependence of countries one to another. The homeland is studied first and then the outlying areas. In each unit, comparisons are made with similar areas studied in the fourth and fifth years. The titles of the units* suggested are as follows:

Unit I—Scandinavian Peninsula and the Baltic Countries
Scandinavia: Norway and Spitzbergen, Sweden
Baltic Countries: Finland, Estonia, Latvia, Lithuania

Unit II—Small North Sea Countries and Outlying Areas: The Netherlands, Belgium, Denmark, and Their Respective Outlying Areas, and Iceland

Unit III—Germany

Unit IV—France and Outlying Areas

Unit V—Mediterranean Peninsulas and Outlying Areas: The Iberian Peninsula (Spain, Portugal), Italy, and Their Respective Outlying Areas, Greece

Unit VI—Switzerland and Austria

Unit VII—Other Central European Countries: Poland, Czechoslovakia, Hungary, Rumania

Unit VIII—Balkan Countries: Yugoslavia, Albania, Bulgaria, European Section of Turkey

Unit IX—Union of Soviet Socialist Republics

Unit X—**Other Small Areas of Continental Europe

A. Independent Principalities: Andorra, Liechtenstein, Monaco, San Marino

B. Grand Duchy: Luxembourg

C. Area Under the Protection of The League of Nations: Free City State of Danzig

Unit XI—The British Isles

A. The United Kingdom: Great Britain (England, Scotland, Wales), Northern Ireland

B. The Irish Free State

Unit XII—Europe as a Whole on the Basis of Land Uses or Work Patterns, and Distribution of Population

In addition to the semi-pictorial graph, the multiple unit graph, and the bar graph, which have been used in the fifth year, the bar graph, either vertical or horizontal, is employed, *The World Alma-*

* The term "unit" is used in these suggestions to indicate blocks of subject matter. In organizing teaching units, teachers may wish to combine a number of these blocks. Experience has shown that the number of distinct units which can be developed adequately in any one year is relatively small.

** Consult a recent yearbook such as the current WORLD ALMANAC or THE STATESMAN'S YEARBOOK to obtain the latest information relative to the political status of each of these small areas of continental Europe.

nac and *The Statesman's Yearbook*, if it is available, are used freely both in gathering information and in verifying conclusions or information obtained from some other source.

By the end of the sixth year, children should have formed the habit of turning to maps, graphs, pictures, specimens, and word matter for information and of checking that information by consulting additional references, and they should have acquired skill in the use of each tool. They should have developed the ability and habit of thinking geographically, that is, of seeing the relationships between the activities of the people and their natural environments in the various countries of Europe and their respective outlying areas. In seeing these relationships, they should have developed an appreciation of the different adjustments that the various peoples make in order to earn a livelihood in their respective environments, and an understanding and appreciation of the interdependence of regions and nations. (For sixth year attainments see *The Thirty-second Yearbook* of the National Society for the Study of Education, pages 261 to 264, Public School Publishing Company, Bloomington, Illinois, 1933)

II. Suggestions for Development of Units

Unit I—The Scandinavian Peninsula and the Baltic Countries

Every country included in this unit will be developed in relation to the entire unit. Norway and Sweden, as the most important ones, should be given more time than Finland and the New Baltic States. Estonia, Latvia, and Lithuania, though separated politically, may be developed together as they have so many common characteristics.

The development in full of Norway will illustrate for the teacher one way by which a country may be developed. Approaches and activities will vary, depending upon the children and geographic personality of the country. See page (13)

Norway

A. Purpose

1. An understanding of the geographic personality of Norway

   On account of the high, rugged surface, the thin soil, and the severe climate of the interior, the people of Norway have tended to concentrate along the western coast and in the southeastern part of the country where limited farm activities are possible. So poor has been the natural environment on the land, that many of the people have had to look to the sea for a livelihood. An important fishing industry has grown up; brave, strong sailors have developed; a great merchant marine has resulted; and the country has become primarily a maritime nation. With the more recent development of hydro-electric power, manufacturing has gradually increased, railroads have been electrified, cities and farms have been lighted, and many farm implements are being run by electricity. The tourist industry has also become increasingly important, as many visitors are attracted by the "midnight sun" in summer and the beautiful fiord coast. Modern forestry is now being practiced where possible and dairying is increasing, but the sea is still the center of activity for many of the Norwegians.

2. An understanding of the geographic relationships between facts and conditions in the lives of the people and facts and conditions of the natural environment in Norway, such as:
   a. Farming in the very narrow valleys along the western coast and in the southeastern part of Norway is closely related to the lowland areas, a moist temperate growing season, soil better adapted to the raising of crops than found elsewhere in Norway, and easy access to the sea.
   b. The size of the farms, mostly less than five acres and relatively few more than twenty-five acres, is due largely to the very narrow valleys and small lowland areas.
   c. The raising of hay, oats, and root crops is related to the long days in summer, which in turn, are related to the high latitude, and from twenty to forty inches of rainfall during the summer (six months).
   d. The drying of hay on racks is due chiefly to heavy rainfall, heavy dews and much fog, all of which cause damp ground.
   e. Dairying is due partly to the mountain grasslands above the forest line, and farmlands suited for the raising of hay, oats, barley, and root crops.
   f. Lumbering, especially of pine and fir, on the southeastern slope draining to the Skagerrak and in the region of Trondheim is due in part to forested hills and easy access to the sea.
   g. Norway's importance as a maritime nation is due in part to the nearness of the inhabited areas to the sea, the rugged topography, the thin soil, and a short growing season.
   h. The development of an important fishing industry is definitely related to an abundance of fish in the sea and an irregular coast with good ice-free harbors.
   i. The slight development and little use of the mineral resources is related to the difficulty of building railroads which, in turn, is related to the rugged topography and high altitude.
   j. The mining of coal in Spitzbergen, due to the need of coal to furnish power for ocean steamers, is definitely related to the lack of coal in Norway.
   k. The manufacture of chemicals and fertilizers is due in part to the swift mountain streams.
   l. The electrification of the railroads is related to the development of much hydro-electric power, which in turn, is due largely to an abundance of potential water power and the lack of coal.
   m. Water transportation along the western coast is related closely to the fiorded coast protected by thousands of rocky islands, making an inland waterway for ships.
   n. The tourist industry in summer is largely due to the beautiful scenery along the coast and also the "midnight sun."
   o. The importation of food stuffs is closely related to much

waste land, thin soil, relatively small lowland areas, and a short growing season.

p. The great value of the exports of fish and fish products (almost one-third of the value of all the exports) is due in part to the fiorded coast and islands, which provide spawning grounds and protection to fishing boats; the high latitude, which favors an excellent quality of fish (and facilitates their preservation); and freedom from ice during the entire year.

q. The sparse population and the concentration of population in western Norway along the coast is due partly to the rugged topography and the high latitude of the country together with the influence of the sea.

r. The thriftiness and intelligence of the people, due partly to the necessity of overcoming difficulties, are related to the seasonal and other weather variations and the rugged surface of the country.

s. The nomadic life of many of the Lapps of northern Norway is definitely related to the high latitude and high surface; hence, scant pasturage for their reindeer.

B. Suggested Activities

Since approximately forty per cent of the people of Norway earn a livelihood through agriculture and forestry, we may approach the study of this part of the unit related to Norway through the major of these activities, agriculture.

Black's Geography Pictures on Europe, Numbers 19 and 48, mounted without caption, may be presented to the children. One picture shows hay-making in a narrow valley with the hay drying on racks; and the other picture presents a high mountain pasture, on which are seen a few cows, rather scant vegetation, and several one-story buildings. Or possibly, there are similar pictures in the text that may be used. If the group is large, and a projector is not available, the pictures should be passed around so that each child may see them at close range. The children should be advised to keep in mind all the things that are seen in the pictures.

When both pictures have been studied by all the children, the teacher should stimulate their thinking by questioning. What did you see in the pictures? As the children enumerate the items seen, they should be written on the blackboard:

cows	mountain slopes
a small stream	a man
rocks	a woman
several small buildings	a cart
some shrubs	two rakes
something hanging on racks	

What occupation or occupations are shown? (grazing and something else) What does the man in Picture 19 have in his hand? What is he raking? What seems to be lying on the ground behind the woman? Do you think it looks like hay? Can you think of any reason why hay should be hung on a rack? Of what does the rack seem to be made? (Wood) Does

that suggest a wooded land to you or a lack of trees? We will find out a little later why the hay is hung on racks. Let us turn to the other picture. Do you think Picture 48 shows a mountain slope near the base of the mountain or one high up on the mountain? Yes, it is a pasture land above the tree line. Such a pasture land high up on the mountain is sometimes called a saeter. Do you suppose that cattle graze on this high mountain pasture during the whole year? Why not? Look at the other picture. Do you think this narrow valley with its mountain slope is farther up the mountain or below the pasture lands shown on Picture 48? Why? Yes, that is true. The growing season is a little longer here, so the hay has a better chance to mature. Then, too, the distance the hay must be taken down the mountain to the winter home is less than from the higher pasture lands. The cows possibly grazed on this land on their way up to the higher pastures, and will likely graze here on their way down the mountain when it begins to get cold where they are now. Why do you suppose the cattle are driven so far up the mountain to pasture? (Possibly little pasture land near home)

Do you think these cows are kept for their milk and cream, or for butchering purposes? (For the milk and cream) What is done with the milk during the long stay on the mountains? Yes, the girls or women come up with the cows, milk them, and make butter or cheese out of the cream and milk. Where do you think they live while on the high pastures? Yes, they live in the small houses shown on the picture and the cows are sheltered in the larger buildings to the left. Often some of the boys also come along to look after the cows.

The children should be told that these pictures were taken in Norway. Does any child know where Norway is? Yes, it is in Europe. How can we best find it? (On a map of Europe) What kind of a map should we use? (Physical-political) How can one most quickly find the map? (In the table of contents) All right, quickly find the map. The children find Norway on the map in their text, and then on a physical-political wall map of Europe. It is also located on the globe. In what part of Europe is Norway? Notice that Sweden lies east of Norway. What natural division of land do Norway and Sweden form? Yes, it is called Scandinavian Peninsula.

Do you have any idea in what part of Norway these pictures might have been taken? (It is hard to decide because so much of the country is mountainous) In what latitude does Norway lie—tropical, low, middle, or polar? (Polar middle and polar) Let us turn to the map of the world and compare the latitude of Norway with that of Labrador. (Norway is farther north than Labrador.) Now, in what part of Norway should we expect these pictures to be taken? (In the southern part) Why? (Too cold in the north—very far north) How can we find out whether or not we are correct in our thinking? The children then turn to their texts and reference books to determine whether or not grazing and the making of hay are confined to southern Norway.

While they are engaged in this intensive study, the teacher should assist those needing help, and should encourage the checking of facts obtained from one source against those acquired from one or more other sources. Maps, other pictures, and word matter should be consulted. When the children have exhausted the material at hand on the subject under consideration, the group's attention should be directed to a discussion of their findings.

Probably the class will report that the climate of coastal Norway is much warmer than any other part of the world in the same latitude. The question naturally follows: Why is it warmer? And thus the discussion continues, the children finally stating that the hay is dried on racks because there are heavy dews which make the ground damp. Throughout the entire part of the unit related to Norway there should be a continuous tie-up between what man is doing and the items of the natural invironment that affect his activity.

From grazing, dairying, and hay-making one can easily go to the other farming activities. The children find that the lowland areas are small and scattered with the exception of the region around Oslo, and as a result the farms are small. Attention should be called to the irregular coast line and a comparison made with that of southwestern Alaska. If the children are not familiar with the term fiord, it should be developed. Numbers 2 and 49 *(Black's Geography Pictures on Europe)* or similar pictures will be of help in impressing the children with the fact that the sides of these long narrow bodies of water are often very steep and high; that these fiords have been caused by the land along the coast sinking or being submerged in the water; that erosion has played a part in their formation and in the formation of small relatively level areas at the heads of the fiords. Because of the difficulty of communication and travel as well as because of little good farming lands elsewhere, most of the farms are nestled in the very narrow valleys at the heads of the fiords and in southeastern Norway. They find that only about 3 per cent of Norway is cultivated and that most of the peasants own their own homes. The children find that only the hardier grains can be grown due to the short, cool summers and the moist soil. They find that potatoes and other root crops used for cattle food are also grown. They may be told that some farming and grazing are carried on north of the Arctic Circle and asked how that is possible so far north. They will recall the moderating influence of the North Atlantic Drift. Most of the peasants own their own farms.

During the study of farming the children learned that many of the farm homes and barns are lighted by electricity and that much of the farm machinery is run by electric power. The question comes up: Why is this true? The children may speculate as to the possible reasons for this rather extensive use of electricity. They know that mountain streams are swift; that in these swift streams is much water power. Here the term potential, with reference to water power, should be in-

troduced. Do you know definitely that Norway has much potential water power? How can we find out? (Consult the text and reference books in which are statistics dealing with the potential water power in Europe.) Let us do that. While you are getting that information, you may also find whether or not Norway has developed much of her potential water power. The children are told that electric power made by the use of water is called hydro-electric power. From this time, the terms potential water power and hydro-electric power will be a part of the geography vocabulary.

We learned that about 21 per cent of the country is forested and that the forest cover is very irregular. Why do you suppose it is irregular? (Because of glaciers, bare rocks, thin soil, steep slopes, and low temperatures on the mountains) What kind of trees do you think might grow in the more favored regions? (Many pines and firs) What more do you think we should know about these forests? (Where they are and of what value to the country) All right, see how quickly you can get that information. The chief forested areas should be located on the physical-political map. It should be noted that each of these areas has railroad service.

You told us that much of the timber is now being used at home, that is, in the local factories. What would you expect to be used as power in these factories? (Hydro-electric power) Why is coal not used? Some child noticed, during the period of study, that Norway has no coal. Do you see how nature has helped supply the country with a substitute for coal? Are there manufactures other than the forest products? (Not many) Does Norway have many or few raw materials? (Relatively few) Let us find out what other products are manufactured here. The children use their texts, reference books, and magazines to find that textiles, aluminum, cement, and fertilizers are other important manufactures; that in the output of aluminum, Norway is surpassed only by the United States and Germany; that her manufacturing favors raw materials of small bulk, but much power. Why is so much aluminum manufactured in Norway? The children may not be able to answer this question. Of what is it made? What type of raw product is bauxite? If a specimen of bauxite is available, it should be shown to the children. Of what are the fertilizers made? Here there may be quite an interesting discussion on how the Norwegians were the first people to make fertilizers out of the nitrogen in the air, using hydro-electric power in the factories. Does Norway have minerals other than bauxite? (Some iron ore) Why are iron and steel manufactures not important? (Little iron ore is mined) Why is this true? (Too difficult to transport it, due to difficulty in building roads) It is noted that the local foodstuffs and other raw products are manufactured for home markets; that manufacturing has been increasing, but is not comparable with that of manufacturing countries.

With a population map of Europe before them, the children note the concentration of population along the western coast

and in southeastern Norway. The term concentration of population should be developed and used. They also note the long irregular coast of Norway. The teacher continues her questioning. Would you expect many or few harbors along the coast of Norway? Why? Do you think that ships can easily land along the narrow, steep-sided fiords? (Yes, the water is deep) What do we find along the coast just west of the fiords? (A fringe of thousands of rocky islands along the coast) Is this an advantage or a disadvantage? After some speculation, it is decided that the islands protect the coast from the force of the ocean. These rocky islands, some of which are just bare rocks, are sometimes called skerries, and the skerries with the winding waters between them are often called the skerry guard. Since most of the people of western Norway live along the coast and the surface is so rugged, how do you think they might travel? Yes, these protected waters provide a water highway on which transportation is largely carried on, and by means of which the farmers are held together.

The children recall the fact that the farms are small; that the crop possibilities are limited; that, while the dairying industry is increasing, the number of cows and goats kept is restricted by the environment; that lumbering and manufacturing are carried on but not as extensively as in many countries; and that mining is not important. Hence, the possibilities for making a living on the land are limited. Can you think of any other way in which the Norwegians might earn a livelihood? Yes, the protected waters on the west coast might encourage fishing. Have we learned anything else about these waters? (They are ice-free during the entire year) What more will we have to know about the waters before we can decide that fishing is important here? (There would have to be fish) Let us find out whether or not there are fish in these waters. The children again refer to their texts and reference books, including statistical yearbooks, and later report their findings.

It should be remembered that, while searching for these facts, the children are, at the same time, learning to use reference materials. The teacher must be alert to the various needs and guide accordingly during the research period.

As the facts are presented, they should be discussed so that the children do not merely present isolated facts, but rather have a geographic understanding of them. The development of the fishing industry in relation to the long, well-protected coast, the many good harbors, the ice-free waters, and the limited opportunities for work on the land is discussed. The whaling industry, which is less familiar to the children than herring and cod fishing, is discussed at some length. The terms maritime and merchant marine are developed in such way that the children may have a definite understanding of their use in relation to Norway.

We found that Norway has no coal. What is used by the ships for power? Can hydro-electric power be used for this purpose? (No) Some child tells us that he has read in his text that coal is obtained in Spitzbergen. Where is Spitzbergen?

With a map (physical-political) of the world before the children, Spitzbergen (an Arctic archipelago, lying north of 76 degrees) is located. It is also located on the physical-political globe. The children are told that these islands belong to Norway; that the larger of these islands lies about 370 miles north of Norway, midway between Norway and the Pole; that coal that will produce steam is mined here; and that three wireless stations connect it with the rest of the world. The teacher then directs their thinking through questions. Recalling what we learned about the length of the days and nights in northern Norway, what may we expect to find in Spitzbergen? Will there be greater or less extremes in the length of the days and nights here than in Norway? Yes, during the summer the sun does not set for several months; and, of course, in winter there are several months of darkness. During what season would you expect the coal to be shipped to Norway? Why? Is there any other reason why it is shipped in summer? (The waters are not ice-blocked in summer) Some child may read and report to the group, the article, "A Woman's Winter on Spitzbergen," in the August, 1928, number of the National Geographic.

The children suggest that some people in Norway make a living by providing accommodations for tourists. Why do tourists go to Norway? A discussion of the beautiful fiorded coast and the "midnight sun" as possible attractions to visitors follows.

We learned that many Norwegians have had to look to the sea for a livelihood; that life on the sea is hard; that because of surface and climatic conditions on the land the people have had to struggle to earn a living. What kind of people do you suppose these conditions have produced—carefree, easy-going people or energetic, industrious, thrifty people? (Energetic, etc.) Yes, and they are interested in education and have good schools. There is practically no illiteracy in Norway. In addition to being good citizens, have the Norwegians done anything that has benefited us and the rest of the world? (They were the first people to produce nitrates out of nitrogen.) Groups of children may do research on Norwegian explorers, writers, and musicians; and later they report to the class. Such people as Amundsen, Nansen, Grieg and Selma Lagerlof should not be forgotten.

Did you find any people other than Norwegians in Norway? (Lapps) Can anyone tell us about the habits of the Lapps? How do they make a living? (By grazing reindeer) On what do the reindeer feed? Why do you suppose the Lapps cannot move far away from where there are trees? (Trees provide fuel) Look at Picture 47 (Black's Geography Pictures of Europe) or any picture of a Lapland home. Does that home suggest a thrifty progressive type of people or not? Why? (Very crude hut) These Lapps present a problem as they are nomadic in their habits and so move about, sometimes living in Norway, sometimes in Sweden, and sometimes in Finland, a country east of Sweden. Why do they move so much? (To

find pastures for their reindeer) They are honest people, however, and are living on land that would otherwise be unused.

In the year 1929, 8029 Norwegians emigrated chiefly to Canada and the United States. Why? (Limited and hard possibilities for earning a living at home)

An airplane trip from Oslo over the mountains to North Cape and return over the fiorded coast may serve as a means of summarizing this part of the unit related to Norway. On the trip, the human activities should be explained in relation to the items of the natural environment.

C. Evidences of Pupil Growth

1. The ability to apply the geographic relationships dealing with Norway to life situations
   a. American made machinery is used in Russia. Would you expect it to be used in Norway? Why?
   b. England has fish and Denmark has dairy products to sell. Would Norway likely provide markets for these products? Why?
   c. Would Norway be a good market for street cars made in St. Louis or in Germany? Explain your answer.
   d. Norway has more telephones than Poland and is well serviced with electricity. Do you think Canada might sell poles to Norway? Why ?
   e. If you were spending a summer in a friend's home in Norway, would you expect to eat more meat or more fish? Why?
   f. If you were employed as an advertising agent by a steamship company, what inducements would you offer tourists to influence them to go to Norway? During what months would you advise them to go? Why?
   g. Norway manufactures much cement. Do you think a cement company's agents might induce the Lapps tc build cement houses, which would be warmer than the ones now in use? Explain your answer.
   h. The mainland of Norway has no coal. The United States has coal to sell. Is Norway likely to buy our coal? Why? If she buys some, during what season would you expect her to buy it? Why?

2. Vocabulary concepts
   a. Fiord, glacier, glaciations, erosion, submerged, precipitation, resistant rock, saeter, skerry guard, polar latitude, polar middle latitude, nitrate, potential water power, hydro-electric, maritime, merchant marine, whaling, homogeneous population, concentration of population
   b. Scandinavia, Scandinavian, Oslo, Bergen, Trondheim (Trondjheim, Nidaros), Narvik, Hammerfest, Spitzbergen (Svalbard) Kiolen Mountains, Lofoten Islands, North Cape, Skagerrak, North Atlantic Drift (Gulf Stream Drift)

3. Locational concepts
   a. The deeply fiorded condition of the west coast in contrast to the less fiorded south coast
   b. The position of Oslo, Bergen, Trondheim, Hammerfest, and North Cape on a map of Norway
   c. The position of the Kiolen Mountains extending almost the entire length of the country and from the Swedish border almost to the coast
   d. The location of the small lowland area in southeastern Norway
   e. The position of Norway on the map of Europe, including the relative position of Norway and Sweden, Norway and Denmark, Norway and the British Isles, and Norway and Iceland
   f. The position of Norway and Spitzbergen on the world map and on the globe, including the direction of Norway from the United States and the relative position of Norway and the United States
   g. The work pattern of Norway, including her transportation pattern and as related to the relief pattern
   h. The population pattern of Norway as related to her relief pattern

4. Specific habits and skills
   a. The ability to read with ease the physical-political map of Europe as a whole or of northwestern Europe and maps of Europe representing population, rainfall or precipitation, temperature, natural vegetation, uses of land, glaciated areas, and areas of production
   b. The ability to interpret the symbols for mountains, glaciers, fiords, rainfall and temperature in relation to the concentration of population, the farming areas, the grazing areas, the manufacturing districts, the fishing region, the tourist industry, and the development of hydro-electric power
   c. The habit of first getting information from maps, pictures, graphs, and possibly statistics, and checking that information against that obtained from word matter; the habit of checking information gained from one geographic tool against that obtained from the use of one or more other tools
   d. The habit of thinking geographically, that is, of associating the human activity with the natural environmental items that affect that activity
   e. The ability to organize geographic materials

5. Desirable feelings, attitudes, and appreciations
   a. An appreciation of the grandeur of the natural phenomena, particularly the "midnight sun" and the aurora borealis (especially in Spitzbergen)

b. A sympathetic understanding and appreciation of the adjustments the people of Norway and Spitzbergen have made and are making in order to earn a living in their rather severe environment

c. An appreciation of Norway's contribution to civilization and culture through such people as Nansen, Amundsen, Grieg and Selma Lagerlof

D. Suggestions for Testing

Test items should include those dealing with pictures, those dealing with maps, those dealing with statistics or graphs, and those dealing with word matter.

1. Test items dealing with pictures

To be effective the pictures used for testing purposes should be new pictures, that is, not the same pictures that were used in teaching. They should also be pictures of high geographic quality, that is, each picture should show both cultural and natural items. The exercise should vary with the pictures available.

The pictures should be mounted uncaptioned and each numbered. If only a few pictures are to be used, they may be passed from child to child. Upon receiving a picture, the child should carefully study it, answer on the test sheet the questions relative to that particular picture, and pass it on. Example:

If the picture of a hydro-electric power plant, with houses clustered in a narrow coastal area is shown, an exercise such as follows may be used:

a. What three evidences of man's activities do you see in picture number ——? (hydro-electric power plant, pipe line, houses)

b. Does this picture indicate that these high mountains have been a help or a hindrance to man? (Both—made hydro-electric power possible, but restricted the location of homes, the means of making a living and the possibility of travel)

c. Do you think these mountain sides could be terraced and used for growing crops? Explain your answer. (No, too steep, bare rocks)

d. How would you expect these people to travel? (By water) Why? (Easiest means)

e. Do you suppose this large power plant makes electricity to be used only in the few homes pictured here? (No) Why was such a large power plant built? (Possibly supplies power for factories or lighting homes and towns miles away)

As previously stated, the exercises will vary according to the pictures available.

2. Test items dealing with statistics or graphs

Statistics such as are given below or a graph made from these statistics, may be used for testing purposes. Very definite questions should be based on the statistics or on the graph, if it is employed. Example:

According to figures compiled by the United States Bureau of Fisheries, the average annual catches for 1927-1930 (shell and whale fisheries not included) were as follows:

Norway	2,050,000,000	pounds
England and Wales	1,894,248,000	"
Scotland	809,605,000	"
Sweden	192,406,000	"
Denmark	97,000,000	"

a. Look at the weight of the fish caught by the people of Norway and the neighboring countries. Which of these countries had the largest annual catch during the period given. (Norway)

b. Which had the smallest annual catch during that time? (Denmark)

c. Which country had a little less than half as large a catch as England and Wales? (Scotland)

d. Compare Denmark's catch with that of Sweden. Was it about ½, ⅓, ¼, etc., as great? (½)

e. Do England, Wales and Scotland together have a larger or a smaller catch than Norway? (Larger)

3. Test items dealing with maps

Map test items should test direction, locational concepts, the use of the scale of miles and geographic principles. The following exercises are suggested:

a. On a desk base map of northwestern Europe on which North Cape and Kristiansand are indicated

(1) print the names—Sweden, Norway, Denmark—in the respective countries indicated on the map;

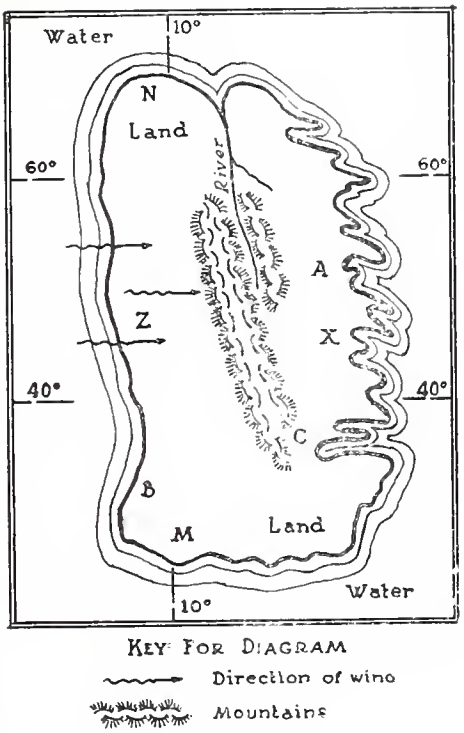
(2) print Skagerrak, Atlantic Ocean, Arctic Ocean, and North Sea where they belong on the map;

(3) several symbols for cities are indicated. Print each name in the proper place (Hammerfest, Trondheim, Bergen, Oslo);

(4) print Lofoten Islands beside the islands on the map.

b. If you flew in a straight line from North Cape to Kristiansand, about how far would you travel? What direction would you fly?

c. The following questions deal with the (hypothetical) map shown on the next page:



(1) Along which coast, east, or west, would you expect to find the greater number of good harbors? Why? (East—irregular coast)

(2) M and N each indicate a region. Which would have the shorter summer days? Which would have the colder winters? Why? (N-N is further away from the equator)

(3) Would X or Z be the better farming region? Why? (Z receives more rainfall than X)

(4) A, B and C indicate the possible locations of cities. Which do you think would be the most likely location for a city to develop? Why? (Easy access to the sea—a good harbor)

(5) What direction is A from B? (Northeast)

(6) From what direction does the wind blow? (West)

(7) What direction is down stream on the river (North)

4. Test items dealing with word matter

In testing through word matter possibly objective test items are to be preferred. They may include matching, completion and multiple choice items involving the identification of cultural and natural items that are outstanding in Norway's personality. Examples:

a. Directions

Match the items in Column 1 with the items in Column 2. Place the proper figures in the parentheses at the right of Column 2.

Column 1	Column 2
(1) Spitzbergen	chief business center of the fishing industry (2)
(2) Bergen	center of the cod fishing activity (5)
(3) Oslo	chief Norwegian coal resources (are in) (1)
(4) Trondheim	largest city in Norway (3)
(5) Lofoten Islands	

(1) Drying of hay on racks	rugged mountains, swift streams, and lack of coal (3)
(2) Small farms	beautiful fiord coast and midnight sun (4)
(3) Development of much hydro-electric power	damp ground (1)
(4) An important tourist industry	rugged surface with only small lowland areas available (2)
(5) The nomadic life of the Lapps	

b. Directions

Complete each of the following sentences by writing the word or words which make the sentence true in the parenthesis at the right of the sentence.

(1) The west coast of Norway has much higher temperatures than most other areas in the same latitude because of the influence of the ..... and ..... *(Westerly winds—North Atlantic Drift)*

(2) There are many good harbors along the west coast of Norway because the coast is very ..... *(Irregular)*

(3) The Lapp lives in a tent-like house with sod piles around its base rather than in a permanent home because he often ..... *(moves)*

c. Directions

In the parenthesis on the right of the page, write the letter that is in front of the clause that completes the statement and gives the best answer.

(1) Hay, barley, oats, and root crops are the chief crops in Norway in part because— (c)
- (a) the farms are small.
- (b) fish are an important food in Norway.
- (c) the growing season is short and cool and the ground is damp.
- (d) wheat and flour are imported.

(2) Norway is primarily a maritime nation chiefly because— (b)
- (a) the Norwegians like the sea.
- (b) the possibilities for earning a living on land are limited, and the irregular coast with its good ice-free harbors has encouraged sea activities.
- (c) there is a sparse population in Norway.
- (d) there are valuable exports of fish.

d. Directions

Read the following paragraph. From the four names below the paragraph select the name that you think fits the description. Place the letter that is in front of that name in the parenthesis at the right of the name.

This, the chief port of Norway, is far out at sea at the end of a narrow peninsula. Protected by the numerous islands and lying between the longest two fiords, it has a splendid location. Partly because of this it has become the center of the herring fishing. It is a distributing center for the necessities of the brave, hardy fishermen and the northern mining settlements; and it is a receiving center for immense quantities of fish, much of which is exported.

(1) Hammerfest (2) Narvik (3) Trondheim
(4) Bergen (4)

Questions such as those listed in this part of the unit related to Norway under C-1 also may well be included as test items.

It should be remembered that the items presented are merely examples and do not make up a complete test by any means. So far as possible, the various test items should be geographic, that is, they should deal with the human and the natural items in relation to each other.

UNIT II—The Small North Sea Countries and Outlying Areas: Netherlands, Belgium, Denmark and Their Respective Outlying Areas, and Iceland

The homeland of the Netherlands should be considered first. The background which the children have secured of this region in their fourth year work may be used as a means of approach. However, on this level emphasis should be placed upon the manufacturing and trade activities of the people and their contacts with their colonies and the other regions of Europe. Among the colonies of the Netherlands, the East Indies should be emphasized in particular.

Belgium should be considered primarily as a manufacturing country, although intensive farming is practiced and commerce is quite important. Of the colonies, the Belgian Congo should be given considerable attention. The children have touched upon this, probably in their fourth year work; but on this level, more consideration should be given to the relations between the Belgian Congo and the rest of the world and the problems which the Belgians have met in developing the region.

Denmark, although a small country, should not be neglected. Emphasis should be placed upon the type of "factory-farming" which has been developed in Denmark, the importance to the people of their cooperative societies, and the type of education which has made it possible for them to become a prosperous group even though they have few natural advantages.

The outlying areas of Denmark are the Faroe Islands, Greenland and the independent country of Iceland, which is joined to Denmark only by having the same king. These regions should be considered briefly, with particular emphasis upon the present development and the possibilities for the future.

UNIT III—Germany

In developing a unit on Germany, the teacher should keep in mind both the manufacturing and also the agriculture within the country. An excellent unit on Germany is developed on pages 239-245 in the Thirty-second Yearbook of the National Society for the Study of Education. While the teacher may not wish to use the unit as outlined, it will give her many suggestions and particularly show the points which should be emphasized.

UNIT IV—France and Outlying Areas

Political France includes six human-use regions which vary greatly in climate and consequently, in agricultural products. These facts make the development of a unit on France rather difficult because each human-use region should be given proper emphasis in its relation

to France as a whole so that the children will not come from a study of France with the idea that Paris or the Rhone Valley represent all of France.

While predominantly an agricultural country, other activities are important: manufacturing in the northeast and northern part of the Rhone Valley, pastoral industries on the central plateau, and fishing off the coast of Brittany and Normandy.

The outlying areas of France include the following:
(On pages 280-284 in the Thirty-second Yearbook of the National Society for the Study of Education are suggested outlines for a study of these areas.)

In Africa

North Africa: Algeria, Tunisia (protectorate), Morocco (protectorate) The Sahara (major portion)
Lands south of the Sahara: French Sudan and Senegal, French Equatorial Africa and Cameron (mandate), French Guinea, Ivory Coast, Dahomey and Togoland (mandate)
French Somaliland

In Asia

French Indo China and Kwangchow
Syria (mandate)
French India: Pondicherry, Karikai, Chandernager, Mahe, Vanaon (on the southeastern coast of India to the north of Ceylon)

In the Western Hemisphere

French Guiana
Islands of the Caribbean: Guadaloupe, Martinique (part of the Windward Islands in the West Indies)
Islands of the North Atlantic: St. Pierre, Miquelon (close to southwest coast of Newfoundland)

Other French Outlying Areas

Corsica
Madagascar, Reunion, and the Comoro Islands
Islands of the Pacific: Tahiti and other small islands of the southern Pacific (grouped together as one colony are the Society Islands, the Marquesas, the Tuamoti Group, the Leeward Islands, the Gambier, the Tubusi, and the Rapa Islands); New Caledonia and its dependencies (the isles of Pines, the Wallis Archipelago, the Loyalty Islands, the Huon Islands, Fortuna, and Alofi); and New Hebrides (jointly administered by Great Britain and France)

The areas of North Africa are probably the most important and should be given the major amount of attention. On pages 280-284 of the Thirty-Second Yearbook of the National Society for the Study of Education will be found suggested outlines for the study of these areas.

Using a good physical-political map, the teacher, working with the children should develop major relationships in the Asiatic regions. Making deductions from the latitude of the countries, the surface conditions shown on the map, and the distribution of population, and re-

lating this to what they already know about low latitude countries, the children should be able to make very definite inferences concerning the probable activities and conditions in the areas of French Indo China, Kwangchow, and French India. These inferences can be quickly checked by means of textbooks. Possibly Syria should be given a little more time; although here again, using the background the children already have with some map and picture study, they should get a quick, yet accurate view of the region and a geographic understanding of it.

In considering all of these outlying areas of France, contacts with the homeland and with other parts of the world should be constantly emphasized so that the children will have finally a feeling of the interdependence of the various regions of France and of the world-wide influence of France.

Unit V—The Mediterranean Peninsulas and Outlying Areas

Spain

The first political region in this unit to be considered is Spain. The children frequently come to a study of Spain with considerable prejudice and an unfavorable attitude. The teacher should recognize this and be prepared, in developing the unit, to help the children to see that the plateau character of the land, broken by mountain ranges and cut by deep river valleys and the very narrow coastal plains have been factors in making transportation between the various regions difficult. Consequently, intercourse has been limited. Furthermore, the semi-arid character of much of the land has made agriculture difficult. Partly because the coal is of poor quality, manufacturing has not been developed on an extensive scale, even though the country is relatively rich in minerals. With few raw materials and few resources for power, the people have been unable to develop manufacturing on any extensive scale. The interaction of these various conditions, in part, has resulted in general poverty and simple standards of living. The high Pyrenees Mountains also have cut her off from the rest of Europe and resulted in considerable isolation.

In developing the part of the unit related to Spain, the valleys and coastal regions of the Mediterranean, where the densest population is found, should be emphasized. The plateau is a region entirely lacking in most advantages, and lastly, the northern area, facing the Bay of Biscay, with its mineral resources and its fishing is the third region to be considered.

The differences in these three regions has been reflected in the last few years in the political condition of the country, each region seeking to control the central government. While some of the political aspects are perhaps beyond sixth grade children, yet to some extent, the teacher should bring out this relationship. Some of the group will probably see the relationship readily and will be interested in tracing the ideas through current events.

The outlying areas of Spain are relatively unimportant, but the class should at least become acquainted with them. The Balearic Islands, lying east of Spain in the Mediterranean Sea, are a picturesque spot. Then, there are the Canary Islands, lying about sixty miles off the

northwestern coast of Africa. Their historical importance is to be considered in discussing them.

The Spanish areas in Africa consist of the Rif, Ifni, Rio de Oro, and Rio Muni. Fernando Po is an island in the Gulf of Guinea. None of these are important and probably all that is needed is to locate them on a map and discuss briefly the probable conditions as suggested by their location on the earth.

Portugal

Portugal is so different from Spain it should be given separate consideration. Facing as it does the west, with much heavier rainfall and with numerous valleys, the people have made quite different adjustments. The very fact that Portugal has always managed to maintain its independence with little difficulty indicates, in part, the separation of the two.

Of the two countries, Portugal is the more progressive, the probable reason being her better natural environment. The fertile valleys, abundant rainfall, and moderate temperatures have helped to make Portugal one of the garden spots of Europe.

The outlying areas of Portugal in Africa have made comparatively little progress and should be treated briefly. They consist of Angola, Mozambique, and Portuguese Guinea. The Azores, the Madeira and the Cape Verde Islands, also St. Thomas and Prince's Islands in the Gulf of Guinea belong to Portugal. These should be located and discussed briefly. All of these islands are more important from the historical standpoint than from the present. Consequently, the children should be acquainted with them because they will meet them frequently in the early colonial history. The Azores are important today as a possible station on the air lines from Europe to North America. In India, Portugal has three small areas: Goa, Damao, and Diu, and near China, the Port of Macao.

Italy

Of the various Mediterranean peninsulas, Italy probably should be given the greatest amount of time. Economically and socially, Italy is divided into two somewhat distinct regions on account of differences in physical environment. Northern Italy is the more progressive. Agriculture and manufacturing are well developed. Important industrial centers have grown up in this region, especially since the development of hydro-electric power. In central and southern Italy, agriculture is still the dominant industry but it is carried on under much more primitive conditions. The scanty and uncertain rainfall, poor soil, and rough topography, have been great hindrances to these two areas.

Italy also has African areas consisting of Libya, Eritrea and Somaliland. These areas are of comparatively little importance because of their arid condition. They present a contrast particularly to French Africa and in considering them, the teacher should be sure that the children understand that one of the reasons why Italy has not made the progress with her colonies that France has with hers is due, to a considerable extent, to the aridity of the lands which makes development almost impossible. The Aegean Isles, a group of fourteen islands, largely inhabited by Greeks, belong to Italy.

Greece

Greece is an interesting example of the interaction of sea and land upon the development of a people. From the standpoint of numbers employed, agriculture is the most important occupation. Yet, the people of Greece have always been a seafaring people. In most respects, Greece is a typically Mediterranean region, with its olives, grapes, and wheat. Many interesting geographic relationships may be developed during the study of this country.

Unit VI—Switzerland and Austria

In a consideration of Switzerland on this level, care should be taken that the manufacturing industries of Switzerland and the importance of her location in the midst of Europe are given proper emphasis. Dairying has probably been emphasized in the fourth grade. It should not be neglected in this grade, but the children should be led to a more intensive study of the varied activities. The effect of altitude upon temperature should be noted. The significance of the fact that the world has chosen Switzerland as the headquarters of so many international activities should be shown.

The reason Austria is placed in the same unit with Switzerland is because modern Austria is land-locked like Switzerland and has similar scenery—high Alpine mountains, glaciers, waterfalls, beautiful valleys, and forests. Austria has not as yet made full use of these natural resources as the Swiss have done; if Austria remains politically as she is today, she must adjust herself better to her natural environment.

This whole unit will give an opportunity for the teacher to help the children to see how necessary it is for a people to study their natural environment and to plan for its best use.

Unit VII—Other Central European Countries

Poland

In many respects, Poland resembles the North Central States of the United States, with the great lowland, its fields of corn and wheat, its oil, salt, and coal. The introductory study may be made from a physical-political map. The children should now be able to make inferences concerning the probable climatic conditions of Poland from the map; and then, reading facts from other maps of Europe, such as product maps—iron, coal, and oil maps—they should be able to make inferences concerning the natural conditions in Poland. These natural conditions should suggest certain possibilities in the way of human activities. Comparisons also may be made with the north central farming region in the United States. Following this, the children should check their inferences by reading in their texts and supplementary books.

Czechoslovakia

Czechoslovakia is one of the most interesting countries of central Europe. It is divided into three regions: the Bohemian Plateau in the west, the Moravian Valley and surrounding regions in the central part, and the forested mountainous regions of Slovakia in the east. The differences in climate and surface of these three regions have somewhat complicated the development of the new republic. Each should

be discussed separately and then the three woven together in a picture of the land as a whole.

Many products from Czechoslovakia may be found in our stores, especially in the five and ten cent stores. A few of these articles brought into the schoolroom and connected with this inland country of Europe, will frequently bring up the question, "How can these articles be made in Czechoslovakia and brought to this country and sold so cheaply?" This gives an opportunity to bring out how these people have used their natural resources to an advantage.

Hungary

Hungary is not as picturesque as some of the other countries of Europe, but two great industries, raising of wheat and corn and grazing of cattle and sheep, are points of contact with our western lands. One point of contact may be made through Budapest, which is frequently called the Minneapolis of Hungary. In discussing the reason for such a title for a city in mid-Europe, bring out the importance of wheat as a crop in Hungary. The reasons why wheat is the outstanding crop and is the most important export from Hungary and why the milling industry of Budapest is so important should be developed. Corn is another important crop; it is used in Hungary, as in this country, chiefly for the feeding of stock. The cattle and sheep industry of Hungary differs from ours in many respects, and yet it will suggest likenesses to make a comparison of value.

In developing these human activities, the natural conditions behind them, such as the basin-like character of the country, the thick alluvial soil, the continental climate, with rainfall seldom more than twenty-five inches per year, and with summer and winter temperatures much like those of our Nebraska, should be emphasized.

Rumania

Since a study of Rumania will probably follow that of Hungary and the two countries are connected by a natural highway, the Danube River, it may be advisable to travel southeast on this highway to Rumania, using a physical-political map, and go from a land of corn and wheat in the middle Danube plain, through the Iron Gate, to a land of corn and wheat in the lower Danube. The natural advantages of the two countries may be contrasted. From the viewpoint of agriculture, they are much alike; but Rumania has the advantage of having deposits of petroleum, natural gas, iron, gold, salt, and mica. Her position on the Black Sea also gives her certain commercial advantages which Hungary does not have.

Unit VIII—The Balkan Countries

Yugoslavia

Yugoslavia, which is the largest of the Balkan countries, was formed by combining the former Serbia, Montenegro, and a part of the former Austria-Hungary Empire. Although having a coast line on the Adriatic Sea, because of the Dinaric Alps, this coast line is of little value to the country, which faces eastward toward the Danube.

This peculiarity has brought many problems to the people. The mountainous section is extremely rough and because of its limestone

character is scantily populated. Although having a considerable rainfall, the water disappears rapidly into the limestone and, consequently, plant life does not get the full benefit of it. This gives a somewhat semi-arid character to much of the mountainous area.

In the lowlands, wheat, sugar beets, and tobacco are important crops. In the beech and oak forests, hogs are fattened. Along the Adriatic coast in the narrow valleys, olives, grapes, and fruits are raised. Although this country contains varied mineral deposits, they have been little developed and very little manufacturing is carried on. The contrast in these various activities in various parts of the country makes the development of a unified picture rather difficult.

The children should come from a study of this unit with an understanding of the difficulties which this country has to face in developing industrially and politically.

Albania

Albania is a tiny country among the Balkans and is of slight importance except as a bone of contention between Italy and Yugoslavia. Nevertheless, a brief consideration of it should be given. It is still a rather primitive country. The customs and language have been retained from invaders largely because of the mountainous nature of the land. Agriculture, carried on in a primitive manner, is the chief activity, together with the grazing of animals in the mountainous areas.

Bulgaria

The statement, "Bulgaria has been called the land of roses and also the land of contrast" may be used to motivate a study of the country. The Bulgarians are probably the most capable people of the Balkans and the future of this region may depend, to a considerable extent, upon what takes place in this country. Consequently, the children should secure a clear idea of the people, their natural environment and activities, as the Balkans are still probably the powder keg of Europe. About three-fourths of the people are engaged in agriculture in the plains of the Danube and the Maritza, and crops are much the same as those found in Hungary and Rumania. The Maritza Valley, being protected by the mountains at the north, grows such crops as tobacco, corn, roses, and fruits, particularly plums. Consequently, special industries have developed, such as making of attar of roses and plum marmalade. Considerable mineral resources are found, such as coal, iron, copper, gold, lead, although mining is not extensively developed. Manufacturing has been slowly developing.

European Turkey

The territory of Turkey in Europe is very small, being only about one-fourth the size of Pennsylvania. A very brief discussion is all that is necessary for this area. The chief objective is for the children to understand that there is still Turkish territory in the continent of Europe and particularly the importance of its location between the Black Sea and the Aegean Sea and between the rest of Europe and Asia.

Unit IX—The Union of Soviet Socialist Republics

In developing a unit on the Union of Soviet Socialist Republics, probably the best way to consider it is from the standpoint of natural regions: the belt of tundra in the north; the belt of forests or taiga; the grassland or agricultural belt; the steppe and desert to the south; and the small Mediterranean area facing on the Black Sea.

Each of these belts is not only a natural region but also a human-use region as the people's activities have become adjusted to the natural conditions in that particular area. While lumbering is important in the forest region, agriculture in the grassland area and in the irrigated section of the steppe and desert as well as in the Mediterranean region is the outstanding activity; yet attention must be given to the rapid development of mining and manufacturing throughout the realm. Great industrial centers have grown up within the last few years on account of the opening up of many mineral areas and coal areas, as well as because of the installation of hydro-electric plants. This shifting from a strictly agricultural basis to industry and the mechanizing of agriculture are rapidly changing the whole character of human adjustments. This fact must be taken into consideration in developing this section. The children must not leave with the idea of the Russia of 1914.

Unit X—Other Small Areas of Continental Europe

There are a number of little independent principalities in Europe with which the children should become acquainted. These appear frequently in literature of Europe and in connection with tourists' trips. They are Andorra, which is a little republic in the Pyrenees Mountains; Liechtenstein, which is a small principality along the upper Rhine between Austria and Switzerland; Monaco, on the Mediterranean coast; San Marino, which is northeast of Florence in the Apennine Mountains; and the Grand Duchy of Luxembourg.

Unit XI—The British Isles

While in most textbooks the British Isles are treated first, we have left them to the last because of the complexity of the geographic relationships involved. One has, within the British Isles in the way of human activities, everything from the primitive type of highland farming and animal industry in the highlands of Scotland, to the highly complex manufacturing centers of Manchester and Liverpool. The manufacturing and commerce of Great Britain are so interwoven with the rest of the world that it is difficult for the children to understand this development until they are fairly well acquainted with many other regions.

While manufacturing and commerce should be given first place in a consideration of human activities in Great Britain, the farming and animal industry should not be neglected. At the present time, particular attention should be given to the readjustment of activities in Great Britain to changing world conditions. Greater attention is now being given to agriculture and some types of manufacturing are being changed. The teacher needs to look to magazine and newspaper articles to secure accurate material concerning these changing conditions.

The Irish Free State should be considered separately from the rest of the British Isles. The difficulties of developing this little country should be stressed and attention given to climatic, surface, and soil conditions. The interrelation with Great Britain and the effects of the separation of the two should be understood.

UNIT XII—Europe as a Whole

During the study of Europe and the respective outlying areas, the country personalities have been the chief concern. Now the work on Europe is summarized through the land uses or the work pattern. In many cases there are no distinct boundaries between the various human-use regions, but rather one merges into another. Sometimes there are small areas separated from the main region, but belonging to it.

There are many activities in which the children might engage in summarizing the study of Europe. The following is suggested:

On a desk base map of Europe print A's in the following regions, distributing more of them in the larger areas: (1) the higher parts of eastern Norway and western Sweden; (2) northern Finland; (3) the tundra area of European Russia. Do you remember what people live in this region? (Lapps) How do they make a living? (Grazing reindeer, hunting, fishing) Since they move about from place to place, what do we call them? (Nomads) What may we call this area? Yes, on the legend or key of your map print A—Nomadic Hunting and Fishing Region.

Print B's in the following regions: (1) western Norway; (2) Sweden north of the southern lowlands, except the part included in A; (3) Finland, south of the tundra region except a small area along the southern coast; (4) European Russia between the tundra and a line drawn from Leningrad through Vologda and on to the eastern boundary. What crops are raised in the cleared spaces? Why are corn and wheat not grown here? In what work are many of the people of western Norway engaged? What name may be given this region? On the legend or key print B—Northern Logging, Farming, and Fishing Region.

Print C's in the following areas: (1) the Irish Free State; (2) the highlands of Scotland; (3) the western coast of Wales; (4) the peninsula of southwestern England; (5) Denmark; (6) the lowlands of southern Norway; (7) the southern lowlands of Sweden; (8) the coastal area of southern Finland; (9) Estonia; (10) Latvia; (11) Lithuania; (12) Northwestern Poland; (13) the eastern plains and the highlands of Germany; (14) the uplands of France, Normandy, and Brittany. What are the chief activities in these areas? Why are dairying and stock farming more important in this region than in the one you marked with B? Why are root crops grown so extensively in these areas? Do you find many grapes grown here? Why? What are the leading crops? In what part of Europe are these areas that you have just marked? Let us call this region the Northwestern Farming Region. You may put it and the symbol on the legend and key.

Print D's in (1) eastern Poland; (2) European Russia south of the B's and extending to the Caucasus Mountains and the Black Sea, omitting the lowland area along the Caspian Sea. How is the land

used in this region? Why was this region not included in farming region C? How does farming here differ from that to the west? Why is this true? Yes, the continental climate partly accounts for this difference. Why are dairy farming and stock farming less important here than in region C? Why did we not include the area west of the Caspian? Since this farming area is east of the Northwestern Farming Region, what would you suggest that it be called? Print D—Eastern Farming Region on the legend or key.

Print E's in the following areas: (1) northern Ireland; (2) Great Britain, except the parts in C; (3) the Netherlands; (4) Belgium; (5) northeastern and northern France and the Lyon district; (6) the Rhine Valley, the Saxony Triangle, Silesia and the western part of the German Plain (including Berlin); (7) southwestern Poland; (8) the Moscow district; (9) western Czechoslovakia; (10) eastern Austria; (11) the plateau of Switzerland; (12) the western part of the Po Valley; (13) the Barcelona district in southeastern Spain. What work activity do you at once associate with this big region including a few scattered districts? Yes, manufacturing is very important and, of course, that means what else is important? Yes, manufacturing, mining, and commerce are the three chief activities of this vast region. Does that mean that these are the only types of work in this region? (Agriculture is found, but it is of less importance than the other activities here.) On the legend or key print E—Industrial and Commercial Region.

Print F's in the following mountainous areas: (1) the Pyrenees Mountains; (2) the Jura Mountains; (3) the Alps Mountains; (4) the Balkan Mountains; (5) the Caucasus Mountains. Would you expect agriculture to be more or less important in this region than in the northwestern farming region? Why? What did you find in Andorra, in the Alps? Did you find the same activities in all of these mountainous areas? Why not? In all of them, agriculture is practiced in the valleys and gentler slopes; in the more rugged areas, sheep and sometimes goats are grazed; where there are mountain pastures above the tree line, dairying is usually carried on; and in the forested areas, logging and lumbering are important. What, then may we call this highland region? All right, print F—Highland Grazing, Farming, and Lumbering Region.

In the following areas print G's: (1) northern Portugal; (2) the coastal area of northwestern Spain; (3) the Garonne and Saone River Valleys; (4) the plains of the Danube River in Austria, Czechoslovakia, Hungary, Yugoslavia, Rumania, and Bulgaria; (5) the Maritza Valley in Bulgaria; (6) coastal Yugoslavia. How do these areas differ from Region C? Would you expect to find the same crops raised here, where the summers are longer? Yes, here there is a greater variety of crops. Wheat, corn, and grapes in addition to the northern crops thrive in this region. Since the crops are varied and cattle are raised, we may call this the Central Mixed Farming Region. Add this name and its symbol to the legend or key.

The areas that remain we shall mark with H. They include what? Yes, Portugal, with the exception of the part in G, the southern half of Spain, including the Ebro Valley and the northeastern coast to the Pyrenees, the Mediterranean coastal areas of France and the lower Rhone Valley, Italy, except the Po Valley, and the Alps region,

coastal Yugoslavia and Albania, Greece, and the western coast of European Turkey. When you think of this fringe of land around the Mediterranean Sea, what work activity immediately comes to your mind? What crops are raised? How is it possible to grow wheat in this region? Do you remember that more sheep than cattle or hogs are raised in these areas? How do you explain this? What are the characteristics of this climate? What name do we give to it? Do you think we might call this region the Mediterranean Farming and Grazing Region? Print it with the symbol H on the legend or key.

As this map, the work pattern of Europe, develops, many more questions and much more discussion than that indicated should accompany the activity. By this means, an opportunity is provided for reviewing work previously taught, for clearing up any difficulties that may be present, and for pulling the various units together into a unified whole.

The Population Pattern of Europe: In a similar way, the population pattern of Europe may be worked out on a desk base map. Questions and discussions should accompany the activity as in the work pattern map.

An Airplane Trip: An airplane trip to the various places of interest in Europe may also prove helpful. In this case, the route followed may be charted on a desk base map. The children may describe the trip from place to place, expressing the human activities in relation to the natural environmental items. As each child will possibly find interest in something different from that in which another is interested, much of Europe may be covered in this way.

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E. MAPS AND ATLASES

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Natural vegetation of the world.
Physical-political map of Europe.
Physical-political map of the world (other than a Mercator projection).
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Slated base map of the world (other than Mercator projection).

Desk Base Maps

Africa
British Isles
Central Europe
Europe
France
Iberian Peninsula
Italy
The Levant
Northwestern Europe
The World (other than a Mercator projection)

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F. PICTURES

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G. Specimens

Philadelphia Commercial Museum Cabinet
See Mary J. Booth's Bulletin.

SEVENTH YEAR

I. General Survey for the Year

Geography in the seventh year has for its major purpose the rounding out of a geographic survey of the earth by developing comprehensions of the geographic personalities of areas that have not been studied during the preceding years. Since a considerable percentage of the area of the earth to be studied is included in the British Empire, and since a study of Great Britain, the motherland for much of this area, has been made in the preceding year, the first units for the seventh year deal with parts of the British Empire.

In order to complete some concepts, a recall of the geography of a few areas studied in earlier years is suggested. For example, a recall of the geography of Great Britain and of Canada is needed to complete a concept of the British Empire.

The geographic experience of the pupils should be recognized and opportunities given for growth in geographic thinking, initiative, use of geographic tools, and means of expressing geographic truths. Articulation with the geography of the latter part of the sixth year is obtained by completing the geographic concept of the British Empire. In building this concept, growth in geographic thinking should result from the fact that we deal with the geography not only of areas inhabited by people whose lives are simple and whose actions are supervised from without but also of self-governing areas far removed from the center of the Empire. Australia is an illustration.

The geography of the Far East, China and Japan, involves a higher level of thinking than has been called forth in previous studies because of the complications arising from a civilized people whose culture—customs, manners, religion—has been different from that of European peoples. Especially the geographic readjustments that the Chinese and Japanese have been making since contacts with Western people were forced upon them, make geographic explanation complicated.

In explaining the responses that the people in various parts of Latin America have made to the natural environment, the complex human situation brought about by the presence of more than one race and culture in various stages of admixture must be taken into consideration.

The titles of the units* suggested are as follows:

Introduction

Recall the outstanding geographic adjustments in Great Britain.
Recall the chief responses that the people of Canada and of Newfoundland have made to the natural environment.

Unit I—Australia

* The term "unit" is used in these suggestions to indicate blocks of subject matter. In organizing teaching units, teachers may wish to combine a number of these blocks. Experience has shown that the number of distinct units which can be developed adequately in any one year is relatively small.

Unit II—New Zealand and other British areas in the Pacific Ocean: British parts of New Guinea, Fiji Islands, Solomon Islands, Nauru Island, New Hebrides

Unit III—British Southern Africa: Union of South Africa, Swaziland and Basutoland, Southwest Africa (a mandated territory), Bechuanaland, Rhodesia (South and North)

Unit IV—British Eastern Africa: Nyasaland, Tanganyika (a mandated territory), Kenya, Uganda, Anglo-Egyptian Sudan, Somaliland

Unit V—British West Africa: Nigeria (a part is mandated), Ashanti and Gold Coast (a part is mandated), Sierra Leone, Gambia

Unit VI—India and Ceylon

Unit VII—British areas along the route to India and the Far East: Route to India—Gibraltar, Malta, Cyprus, Palestine, Suez Canal, Aden, Socotra, Ceylon; Federated Malay States—Singapore, British Borneo, Hong Kong

Unit VIII—China

Unit IX—Japan

Unit X—The Near East as a Whole, Turkey, Syria, Palestine, Arabia, Iraq, Persia, Afghanistan

Unit XI—Africa as a Whole, with some individual attention to the self-governing independent countries: Egypt, Abyssinia (Ethiopia), Liberia

Unit XII—Middle America: Mexico, Central American Countries, West Indies

Unit XIII—Atlantic Countries of South America: Brazil, Uruguay, Argentina

Unit XIV—The Pacific Countries of South America: Chile, Peru, Ecuador

Unit XV—The Interior Countries of South America: Bolivia, Paraguay

Unit XVI—The Caribbean Countries and Adjoining European Outlying Areas: Colombia, Venezuela, The Guianas

Unit XVII—The Polar Regions: Arctic Region, Antarctica

Unit XVIII—A Panorama of the Earth

Distribution of land and water

The earth's covering of natural vegetation: deserts, grasslands, forests

Divisions of earth's surface according to basic geographic adjustments: agricultural lands, grazing lands, manufacturing regions, fishing regions, lumbering regions, unused lands

Chief transportation routes: ocean, inland water, railroad, aviation

Distribution and density of population

Tools to be introduced or used with greater skill and efficiency during seventh year

1. Sources of statistics, such as
   a. Yearbook of the United States Department of Agriculture
   b. Yearbook of the United States Department of Commerce

c. The Statesman's Yearbook
d. The World Almanac

2. Pictures of distinctive geographic value noted in sources other than school books and discriminatingly selected by the pupil as aids in developing the geographic personality of a region
3. Desk outline maps to be completed so as to show distribution of commodity production, natural vegetation area, rainfall or precipitation, population
4. Graphs to be made from statistics: sectional bar, combination bar and line, circular

II. Suggestions for Development of Units

Unit I—Australia

Note: Preparation and procedures for the study of the geography of Australia are written in considerable detail as a guide in the preparation needed for teaching each of the units in the seventh year. See page 13.

A. Purpose of the Unit

1. A comprehension of the geographic personality of Australia

Formerly a British colonial possession, Australia now holds a political position co-equal with Great Britain in the British Commonwealth of Nations. This change in political status is owing partly to the British habits, customs, and ideals of the Australians and partly to the feeling of confidence and independence that the people have acquired in solving the geographic problems that they have encountered while making their homes in the natural environment of Australia.

The comparatively small population is due chiefly to a great expanse of territory with scant rainfall and a considerable area having tropical heat. The population is chiefly in the southeastern part of the continent where sheep and cattle raising, general farming, and mining are responses respectively to semi-aridity; medium to copious rainfall; and deposits of gold, silver, lead, zinc, iron, and coal.

2. Understandings of the interrelations between the life of the Australian people and the natural environment of Australia

a. Distribution of population is related to diversity in climate and land forms.

Few people in the interior is due in part to dry desert. Sparse population in the tropical part is related to high temperature due to low latitude and low altitude. (Australian laws exclude some foreigners who might live and work in this climate.)

About one-sixteenth of the population living near the southwestern corner is related to Mediterranean type of climate and to gold and silver deposits.

Most of the people living in the southeastern part of the continent is due in part to mild winters, warm summers, medium rainfall, fertile soil, and mineral deposits.

b. Sheep raising, the outstanding industry of Australia, is

an Australian response to large areas of scantily watered grasslands in New South Wales, Victoria, Queensland, eastern South Australia, and in western West Australia; mild winters; underground waters in artesian basins.

c. The raising of merino sheep, rather than English breeds, is an adjustment to scanty grasslands in Australia in comparison with the luxuriant grasslands of England.

d. Cattle raising extending farther north than sheep raising is due chiefly to higher temperatures in the northern part.

e. Cattle raising extending farther northeastward than sheep raising in Queensland and New South Wales is an Australian adjustment to better grasslands with more rainfall.

f. The chief wheat belt extending through New South Wales, Victoria, and a small part of South Australia is related to rolling plains, medium temperature and rainfall in winter, and high temperature with less rainfall in summer.

g. Exporting much wool and wheat from Australia, mostly to the United Kingdom, is related to small population on large area in Australia and comparatively large population on small area in the United Kingdom. This difference in population is related to (1) small percentage of area of Australia that has livable climate and suitable conditions for manufacture and (2) large percentage of the United Kingdom with livable climate and suitable conditions for manufacturing.

h. Growing of fruits, such as grapes, oranges, peaches, apples, apricots, olives, and almonds in Victoria and the adjacent parts of South Australia and New South Wales is due partly to the Mediterranean type of climate and to land surface favorable for irrigation.

i. Dairying in New South Wales and Victoria is related to good pasture, corn, alfalfa, fertile soil with medium rainfall, warm temperature, and long growing season.

j. Corn production in southeastern Queensland and northeastern New South Wales is related to (1) fertile soils and plentiful rainfall, owing to highlands to the west and winds from the east; (2) long growing season due to tropical middle latitude and low altitude.

k. Raising sugar, pineapples, bananas, and rice in northeastern Queensland is an Australian adjustment to alluvial plains and hot, moist climate of tropical latitude.

l. Land utilization in successive irregular belts of dairying and fruit growing, winter wheat and sheep grazing eastward from coast of southwestern Australia is due, in part, to decrease in rainfall inward from the ocean.

m. Location and growth of Perth are due chiefly to winter rains on fertile soil, gold deposits of the hinterland, and outlet to the ocean via Swan River.

n. The growth of Sydney to a city of more than a million population is related to the deep, extensive harbor of Port

Jackson, with its irregular shore line; well watered coastal plains, with long growing season; timber on the mountain slopes westward; access to the great wheat, cattle, and sheep plains west of the mountains; nearness of abundant coal supply.

o. The growth of Melbourne is due chiefly to a good harbor; a healthful climate of warm summer and mild winter, with a low, medium rainfall; the valley of Victoria as an immediate hinterland; and the accessibility of the Great Plains region of wheat, cattle, and sheep.

p. The growth of Adelaide is partly due to mineral deposits of the South Australia Highlands, Mediterranean type of climate, and mixed farming in the vicinity.

q. Manufacturing in Australia is related closely to the products of the grazing lands, farms, mines, and forests of the Commonwealth as raw materials; and to the relatively small population, which, in turn, is due chiefly to remote location and dry climate.

r. The self government of Australia is due partly to British origin of most of the people and partly to the healthful climate in southern areas combined with long growing season and variety in natural resources.

s. The type of civilization of Australia is related to western European origin of the people and to comfortable economic standing which, in turn, is related to the natural conditions named above in r.

B. Suggested Activities

Recall from the geography of European countries some of the chief raw materials and foodstuffs that Great Britain imports.

In a study of a physical-political or a poltical map of the world, find the locations and list the names of the principal parts of the British Empire, outside of Europe, from which one or more of the chief imports might come to Great Britain.

Direct attention to Australia.

On an outline map of the world, have pupils color uniformly each part of the British Empire as it is taken up for study.

Use a globe to answer the following questions:

Where is Australia with reference to Pennsylvania? With reference to Great Britain?

How many miles is it from Pennsylvania to Australia?

What is the shortest land-and-water route from Pennsylvania to Australia?

What other land-and-water routes might be used?

Why has Australia been called "an isolated continent"?

What political connections exist between Australia and the British Empire?

Between Australia and Great Britain?

How do people of Australia and of Great Britain aid each other?

In what part of Australia do most of the people live? Why there? How do they make their living?

In using books and maps to answer the last question, the pupils will learn that the southeastern and eastern part of Australia contains the principal agricultural region, the chief mining regions, and the manufacturing areas; also, that it has good harbors, the sites of the chief exporting and importing work of the continent. List these activities.

Wheat growing:

Pay particular attention to the interpretations of figures, such as pictures, maps, and graphs available in textbooks and elsewhere. The interpretation should include first a realization of the facts that the figure shows on its face and secondly, but more fundamentally, understandings of the distinct relations between the people and the natural environment in the particular part of Australia represented by the figure.

Refer to a picture of a work scene on a wheat farm in Australia and use questions similar to those given below to bring out the geographic relationships with reference to wheat listed under A-2.

What work is being done? What machinery is being used? What kind of power is used? If horses, how many? How many men?

Compare and contrast this machine with machines used in the wheat fields of Pennsylvania.

Will you find farmers using more of the large harvesting machines in Pennsylvania or in Australia? Why?

What are the items of the natural environment that favor the use of large machines in wheat fields?

Find on a map the location of the wheat region of Australia. How does the region of Australia where wheat is raised compare with the great wheat regions of the United States in surface and climate? Why have the Australians chosen to raise wheat there?

Read from a physical map the character of the land surface in the wheat belt, to the east of the wheat belt, to the west of the wheat belt.

Read from a rainfall map or maps the character of the rainfall in the wheat belt. Can you give reasons for the rather scant rainfall? Compare the summer rainfall with the winter rainfall. What would you expect in January temperature? July temperature? Why? Can you find maps or statements in your books that show whether or not your ideas on the temperatures are correct?

Have a pupil find in a statistical source the number of bushels of wheat Australia raised in a recent year. (Yearbook of United States Department of Agriculture, World Almanac, or Statesman's Yearbook)

Do you think the people of Australia use all the wheat that they raise? Why?

What do they do with the amount not used at home?

What is one part of the British Empire that imports much wheat?

What are the reasons for Great Britain being a chief market for Australian wheat?

From what seaports is most of the Australian wheat shipped? What means of transportation are used to take the wheat to the seaports?

The accumulation of wheat in cities of Australia before it is exported gives raw material for what kind of manufacturing?

Does Australia export any flour? Consult the Yearbook of United States Department of Agriculture. The exporting of wheat gives opportunity for what kinds of work that tend to increase the size of the towns along the coast?

The discussion of the British market for Australian wheat affords an opening for reference to wool export and for a study of man's adjustment to the natural environment in the greatest industry of Australia, viz., sheep grazing.

The work in cattle grazing and in handling the products of that industry may be studied next to round out the geography of the Great Plains Region and the western slope of the chief mountain ridge.

In turn each of the other regions may be dealt with from the human activities standpoint, viz., the Coastal Region of the East, the valley of Victoria and the Adelaide area, West Australia, Northern Australia.

Coastal Region of the East: Develop the geographic relationships in the existence of fields of corn, hay, and alfalfa; herds of dairy cattle; vegetable gardens; pineapples, sugar cane, bananas, and rice; saw mills and lumber yards; blast furnaces and steel mills.

Valley of Victoria and the Adelaide Region: Account for the presence of orchards of oranges, apricots, peaches, almonds, and apples; fields of wheat, corn, and alfalfa; vineyards; many miles of railroad.

West Australia: Bring out the influence of the discovery of gold on the settlement of southwestern Australia and the relation between other items of the natural environment and farming in that region. Note the character of the rainfall over most of this region and its relation to the population and the work of the people.

Northern Australia: Compare the density of population in northern Australia with that in each of the other large sections of the continent; then examine maps to find the character of the land surface, the temperatures, and the rainfall of this region. What crops might be raised in northern Australia? Why do white people prefer southern Australia? Why do few colored people who are accustomed to high temperatures go to northern Australia?

Tasmania: Compare and contrast the work activities of Tasmania with those of the adjacent mainland. Note the effect of the somewhat higher latitude on agriculture. Why is the use of hydro-electricity prominent in Tasmania?

C. Evidences of Pupil Growth

1. Increase in ability to apply knowledge of geographic relationships in Australia to life situations and problems

If, because of low price of wheat in the world market, Australia should decide to take out of production some of the wheat land of low yield per acre, in what parts of the major wheat belt would wheat growing probably be abandoned? Why are there low yields in those parts?

Judging by the various kinds of work in Australia, what do you think are some kinds of manufactured goods for which salesmen from the United States might find a market in that continent? In what part or parts of Australia would each kind of goods be used?

What commodities may Australians sell in the United States to pay for Australian imports? From what parts of their continent may these commodities come?

During the year 1933, a company of men in England planned to relieve some of the unemployment in Great Britain by sending out to Australia a colony of several hundred British families. It was the thought of the colonizing company that these colonists could, with present-day scientific knowledge, keep well and raise not only food for themselves but also tropical products, such as sugar, rice, cacao, and jute for export to Great Britain. Where in Australia would these colonists go? What obstacles would they meet? Do you think such a colony would succeed? Give reasons. If it were to succeed, how would it affect Australia? Of what benefit would it be to Great Britain?

It has been said that Australia can support a population several times as great as the number of people now living there. Enumerate facts to show whether or not you believe this.

Australia resembles the United States in area, in having most of its people in the eastern part, in having dry climate over much of the western part, and in having its chief ports along the eastern coast. Do you think it will some day have as many people? Why? List your reasons.

2. Vocabulary concepts

antipodes
artesian basin
artesian well
Australian kelpie
British Commonwealth of Nations
commonwealth
emu
eucalyptus trees
isolation
kangaroo
monsoon
narrow-gauge railroad
savanna
sheep paddock
sheep run
southeast trade winds
standard-gauge railroad
westerly winds of southern hemisphere
world market

Other additions to the vocabulary are names of places given under 3.

3. Locational geographical concepts

Adelaide	New South Wales
artesian basin	Northern Territory
Australia	Perth
Canberra	Port Jackson
Cape York	Queensland
Fremantle	railroad connections
Great Barrier Reef	South Australia
Great Dividing Range	Sydney
Great Plains	Tasmania
Iron Knob	Victoria
Melbourne	Western Australia
New Castle	

4. Specific habits and skills strengthened
   a. Habit of turning to geographic tools for interpretation of current events involving Australia
   b. Habit of recalling that world cultural changes have affected geographic adjustments in Australia, and, in all probability, will continue to do so
   c. Skill in handling a globe in such way as to
      (1) Show the map of Australia
      (2) Demonstrate the approximate distance from Pennsylvania to Australia in degrees and also in miles
      (3) Demonstrate the day and hour in Sydney, New South Wales, at the time of the study of this problem
      (4) Account for the season of the year and some probable conditions of the weather in Adelaide and in Darwin at the time of this study
   d. Skill in interpreting a map showing distribution of population and stating outstanding reasons for differences in density
   e. Skill in finding in such sources as the Yearbook of the United States Department of Agriculture, the Yearbook of the United States Department of Commerce, and The Statesman's Yearbook, statistics of commodities produced, exported or imported
   f. Skill in showing graphically relative values; e. g., showing (1) relative amounts of wheat exported by Australia, Canada, Argentina, and the United States and (2) the relative values of the leading exports of Australia in a recent year, or average for several years, for the purpose of calling attention to inter-relations among nations

5. Desirable feelings, attitudes, and appreciations
   a. Appreciation of the similar state of civilization in southeastern and southwestern Australia to that of United States and western Europe
   b. Appreciation of the efforts of Australia and Great Britain to extend modern civilization on this remote continent

c. Appreciation of the two sides of the immigration question in Australia, in view of the fact that, in all probability, laborers from southeastern Asia could cultivate efficiently some of the hotter lands of Australia
d. Recognition of opportunities for mutual helpfulness between the United States and Australia

D. Suggestions for Testing

The tests should be of several types and should deal with the lines of growth indicated by 1, 2, 3, and 4 under the topic, Evidences of Growth.

Type A

On an outline map of Australia with state boundaries drawn, follow the directions given below:

1. Write the names of the states in the proper places
2. Place a suitable symbol to represent the location of
   a. The largest city of Queensland
   b. The chief city of New South Wales—developed around the fine harbor of Port Jackson
   c. The chief railroad center and seaport of Victoria
   d. The most important city of south Australia
   e. The chief city of southwestern Australia
   f. The capital city of Australia
   g. The chief city of Tasmania

   Write the names of each city on the ocean side of the symbol that you have used.
3. Print the large letter *W* five or six times to represent the approximate location of the chief wheat area of Australia, and the small letter *w* two or three times to show another wheat region, but of less importance.
4. Print a large *S* five or six times to represent the region that has many sheep per square mile and a small *s* some twenty times to show areas where fewer sheep are raised per square mile.
5. Follow the directions in *4* with reference to cattle, using the letter C, large and small.
6. Print the letter *M* five or six times to show areas of mixed farming producing corn, alfalfa, vegetables, dairy products, and fruits.
7. Print the letter *T* four or five times to represent areas in which tropical crops, such as sugar, pineapples, and bananas are being produced.

Type B

Select from the four statements given immediately after each question, the statement that is the best answer to the question.

1. Why have farmers chosen to do more mixed farming in the extreme southeastern part of Australia than elsewhere in that country?
   a. More people live in the southeastern part.
   b. Along the southeastern coast there are good harbors through which products may be shipped.

c. This is a middle latitude region in which more rain falls regularly throughout the year than elsewhere in Australia.
d. Some farmers would rather raise several crops on comparatively small fields than one crop on a large field.

2. Why has Sydney grown to be a much larger city than Perth?
   a. Sydney has an excellent natural harbor.
   b. Sydney is nearer than Perth to Great Britain, via the Panama Canal.
   c. Gold was discovered in southeastern Australia before its discovery in southwestern Australia.
   d. The area of productive land adjacent to Sydney is much larger than that near Perth.

In making additional tests of this type, avoid making false statements. One of the four statements may be almost as good as the best, another may have no relation to the question. Much good geographic thinking is promoted if the questions and statements are carefully made with that purpose in mind.

Type C

A physical-political wall map showing Australia may hang before the class.

The ten items of landscape named below may be seen in succession during a journey of about 800 miles in a straight line in a certain part of Australia. On the outline map draw a straight line to represent the route of this journey.

1. An excellent natural harbor—long, broad, and deep
2. Well built wharfs with modern loading equipment and buildings containing great quantities of wool, chilled and frozen meat, hides, skins, and wheat
3. A large seaport with modern industrial plants that manufacture such goods as flour, iron and steel, railroad equipment, leather and leather goods
4. Market gardens, orchards, some corn and oats, dairy cattle
5. Some lumbering along a somewhat steep mountain slope
6. Large flocks of sheep and herds of cattle on rolling hill and valley surface and on broad plains
7. Extensive fields of wheat
8. A semi-arid area with flocks of merino sheep
9. Irrigated areas of wheat, barley, grapes, alfalfa, vegetables, apples, and oranges.
10. A seaport, the hinterland of which furnishes for export wheat, wool, lead, zinc, silver, dried fruits, and grapes and the harbor of which requires much dredging to enable ships to reach the wharfs

A variation of this type of test may have (1) a statement of the items of the landscape along each of three different routes numbered 1, 2, an 3; (2) lines indicated on a map to show the routes followed and designated by A, B and C; (3) instructions to write on a paper the numbers 1, 2, and 3, representing the sets of items and after each write the letter that represents the route in each case.

Type D

Select from the sentences a to j the fact of the natural environment that is most closely related to each of the facts concerning life of people in Australia expressed in sentences 1 to 10. Write each letter beside the number of the sentence that it fits best.

1. Few people live in North Australia.
2. Australians plant most of their wheat during April and May.
3. Newcastle manufactures iron and steel goods or "iron goods and steel."
4. Dried fruits are exported from Adelaide.
5. Comparatively little wheat is raised on the eastern coastal plains.
6. Irrigation farming is practiced in the southern part of New South Wales.
7. Pearl fishing is an industry along the Pacific coast of Queensland.
8. Tasmania is a summer resort for Australians.
9. The proposed spending of money to build a transcontinental railroad from Adelaide to Darwin is considered by some people to be a waste of public money.
10. Nearly 3,000 artesian wells have been drilled in Queensland.

a. The narrow plains on the Pacific side of the eastern highlands have little dry weather.
b. Central Australia has little rainfall and is hot most of the year.
c. The Australian Alps Mountains, in southeastern New South Wales, are comparatively close to the coast of the Pacific Ocean, in latitudes where winds are dominantly from the east.
d. The southeastern part of the state of South Australia has mild temperatures with medium rainfall in winter and warm temperatures with almost no rainfall in summer.
e. The Hunter River Valley, the outlet of which is along the coast about one hundred miles north of Sydney, has valuable coal deposits.
f. Southern Australia has winter rains and summer droughts.
g. Areas of Australia between latitudes 10° and 20° have high temperatures, a short season of heavy rainfall, and much dry weather.
h. The great coral reef named The Great Barrier Reef makes shallow water off the coast of northeastern Australia.
i. Porous layers of rock underlie much of the interior of northeastern Australia and, with other layers of rock, bend upward toward the east, coming to the surface in the eastern highlands.
j. In the southern hemisphere the farther south a place is located the higher is its latitude.

Type E

Physical—political and rainfall wall maps may be accessible to pupils.

Account for the utilization of land in successive, though irregular belts, as indicated inland from the cities named below:

1. Perth: lumbering, fruit raising and dairying, wheat raising, grazing, mining, unused.
2. Darwin: sugar and rubber plantations—now in a dilapidated condition—cattle, unused land.
3. Townsville: sugar and bananas, cattle.
4. Melbourne: mixed farming—corn, alfalfa, dairy products, vegetables, orchard fruits, sheep, cattle—irrigated fields of alfalfa and wheat, sheep, cattle.

Unit II—New Zealand

A. Purpose of the Unit

1. A comprehension of the geographic personality of New Zealand

   New Zealand is a member of the British Commonwealth of Nations, is four-fifths as large as the British Isles, but has less than one-thirtieth as many people. The people, mostly British, have applied their British-learned knowledge to the production of wool, meat, hides and skins, butter, and cheese as a response to a climate somewhat comparable to their old homeland.

2. Understandings of the interrelations between the life of the New Zealanders and the natural environment of their country

   What items of the natural environment explain, at least in part, the following human items?

   Raising many sheep in the eastern part of South Island; exporting much butter; irrigation farming in the eastern part of South Island; manufacturing of secondary importance hides and skins exported to the United States; sheep raising of least importance in the western part of South Island and northern part of North Island; refrigerator shops carrying considerable tonnage from New Zealand; location and growth of Auckland, Wellington, Christchurch; low density of population in New Zealand as a whole.

B. Suggested Activities

The fact that in a recent period of three years the average value of goods imported by the United States from New Zealand was more than $3,500,000 may bring forth questions on what the New Zealanders sell to us and why they have these commodities for sale. These questions should lead to an investigation that makes use of such tools as maps, pictures, statistics, and word material that bring out how the people make use of the items of the natural environment of New Zealand. Direct quotations from a statistical source, such as the Yearbook of the United States Department of Commerce, the Yearbook of the Department of Agriculture, or The Statesman's Yearbook tend

to bring a realization that school activities belong to the everyday affairs of the world. Our exports to New Zealand may be used to interpret further the geography of New Zealand.

Great Britain's commercial connections with New Zealand may be used as an approach.

A current event such as the Antarctic expedition starting from Dunedin may be used as an approach.

Achievements may be ascertained by means similar to those suggested for Australia.

Unit III—British Southern Africa

A. Purpose of the Unit

1. A comprehension of the geographic personality of British Southern Africa

   British Southern Africa extends from Cape of Good Hope northward more than 180 miles and has an area of more than half of the United States. It includes the Union of South Africa, Southwest Africa, Bechuanaland, Southern Rhodesia, and Northern Rhodesia. The population is largely native varying from 75% in the Union of South Africa to 99% in Northern Rhodesia.

   The land utilization agriculturally consists of the production of such crops as tropical, sub-tropical, and temperature-zone fruits; alfalfa, corn, wheat, rye, and barley; and commodities, such as wool, hides, skins, maize, and meat in the southern and central area. Haphazard production of tropical food crops characterizes the north. These activities are the responses chiefly to the changes in climate from the subtropical types, both wet and dry at the south, semi-arid northward and tropical wet at the extreme north. Mining ranks high in economic importance owing to rich deposits of gold, diamonds, copper, and coal.

2. Understandings of the interrelations between the life of the people and the natural environment of British Southern Africa

   Cultural items that may be explained at least in part by items of the natural environment are more white people in the Union of South Africa than in the other areas of Africa; the growing of sugar cane, bananas, and citrus fruits along the southeastern coast; the producing of wheat, cotton, and middle-latitude fruits; the grazing of sheep and cattle in specific areas; the working of many natives in mines; four or five modern cities; Southern Rhodesia more advanced than Northern Rhodesia; Beira, a Portuguese city, the chief port for Southern Rhodesia; sparse population in Bechuanaland and Southwest Africa.

B. Suggested Activities

The approach to the study of African lands of the British Empire may be made by means of desk outline maps of Africa on which the political boundaries are drawn. Using a textbook

map or a wall map as a guide, the children may color or shade distinctly the various parts of the Empire on the outline map in the order in which the parts are named in the list at the beginning of the work for this year. On a population map they may note the comparative density of population in the various parts. Such problems as the following may be developed: Why are some parts sparsely populated? What people make up most of the population? Why has Great Britain desired possession of these lands?

The study of geographic adjustments of the individual areas may begin with the Union of South Africa, approaching it from the standpoint of the value of the site of Cape Town to the early Dutch traders, with the resulting Dutch population, the later value to the British, the trekking of the Boers northward, and finally, the various adjustments of today to specific items of the natural environment in each area.

Unit IV—British Eastern Africa

A. Purpose of the Unit

1. A comprehension of the geographic personality of British Eastern Africa

British Eastern Africa includes Nyasaland, the Mandated Territory of Tanganyika, Kenya, Uganda and Anglo-Egyptian Sudan. Only 27,000 of the 18,000,000 people are of European origin. The southern and central areas produce commercially corn, copra, cotton, coffee, hides, skins, and ivory in response to a narrow coastal strip of hot, moist land and a large plateau of savanna land. The higher inland areas invite British settlers. Anglo-Egyptian Sudan has some hot, wet lands at the south but is mostly arid or semi-arid with the water for irrigation available from the tributaries of the Upper Nile. In response to these natural conditions, much nomadic life of cattle and camel herders occurs and settled life along the Nile produces considerable cotton, with possibilities of more.

2. Understandings of geographic interrelations

What items of the natural environment aid in explaining the following facts about British territory in eastern Africa?

More white people living in the interior than along the coast of the Indian Ocean; sisal hemp raised; hides and skins exported; cotton and coffee exported; cotton goods and machinery imported; many more people here than in Southwest Africa.

In Anglo-Egyptian Sudan few people live in the northern part excepting along the Nile River; few live in the south; cotton is a chief export; hides and skins are exported; gum arabic and rubber are gathered; distant from the Nile millet, wheat, barley, beans, and melons are raised during a part of the year; herders move their cattle westward and northward in the season when the sun is highest; Khartoum and Omdurman are medium-sized cities; possi-

bilities for raising cotton are good; a considerable number of foreigners are in Khartoum.

UNIT V—British West Africa

A. PURPOSE OF THE UNIT

1. A comprehension of the geographic personality of British West Africa

Approximately 22,000,000 natives, with a few temporary residents from Europe as officials, make use of the low, hot, wet coastal region and the higher and drier areas farther inland by gathering palm oil, palm kernels, mahogany, and a little wild rubber; by producing cacao, cotton, peanuts, hides, and skins for export; and by raising manioc, bananas, yams, plantain, millet, and wheat for food.

2. Understandings of the geographic interrelations

What relationships exist between items of the natural environment and the following items concerning human life: British West Africa has a large total population; a few Europeans are in this region; the Europeans live back from the coast as much as possible; palm oil and palm kernels are exported from Nigeria; a large percentage of the world's cacao comes from the Gold Coast; peanuts are a chief commercial crop in the Gold Coast country and in Gambia; cotton production is increasing in Nigeria; cattle, woolless sheep, and goats are raised in northern Nigeria and in Sierra Leone?

UNIT VI—India and Ceylon

A. PURPOSE OF THE UNIT

1. A comprehension of the geographic personalities of India and Ceylon

India, one of the chief parts of the British Empire, comprises an area two-thirds as large as the United States and a population of about 319,000,000. Great diversity characterizes India. Outstanding contrasts in land surface, soil, rainfall or precipitation, temperature, length of the frostless season and differences in human activities related to those contrasts have divided India into three major geographic regions, each of which has at least three prominent subdivisions.

Ceylon is a separate political division where agriculture is carried on chiefly in the south in part because of topographic and climatic conditions.

2. Understandings of geographic interrelations

Among the cultural items that should be explained are the production of the Bengal area; wheat growing in the higher parts of the Ganges-Indus Plain; manufacturing in Bombay and Madras; exportation of wheat, burlap, and tea; irrigation in the Punjab and on the Deccan; nomadic people in Baluchistan and northwestern India; sparse population in a large part of the Indus Basin; menace of famine on the

Deccan; network of railroads greater in India than elsewhere in Asia; dominance of village life; irrigation on the eastern slope of the Western Ghats but farming without irrigation on the western slope; lumbering and oil refining in Burma; sun-dried brick for houses on the Deccan; seaports at Calcutta, Madras, Bombay, and Karachi; plantation agriculture in Ceylon; and many cattle raised in India.

UNIT VII—British Areas along the Mediterranean Route to India and the Far East

A. PURPOSE OF THE UNIT

An understanding of the desire that Great Britain has for aiding transportation along this route, and a comprehension of the parts of the Empire that assist in the movement of commodities here

B. SUGGESTED ACTIVITIES

Recall the dependence of Great Britain on commerce. Recall also the political and commercial relations between Great Britain on one side and India and Australia on the other. Find on a world map and on a globe the various routes by which imports from Hong Kong, Australia, Singapore, and India may reach Great Britain. Which route is the shortest? Be sure to use a globe in finding the shortest route.

Trace along this shortest water route, naming water bodies traversed, a shipment of some commodity which Great Britain imports in considerable quantity from India, Singapore, or Australia; e. g., jute, tin, or wheat. Find along this route places where the waterway narrows and places near the route that afford opportunity to get coal, oil, repairs, and other supplies to aid British and other vessels. Which of these places are British controlled?

Find in The Statesman's Yearbook, The World Almanac, or elsewhere, statistics on the traffic of the Suez Canal: number of vessels passing through in a year, tons of freight, and number of British vessels in comparison with other countries.

Compare and contrast the Suez Canal with the Panama Canal in such items as those named in the preceding paragraph, also in the natural characteristics of the land through which the canal passes and the resultant contrasts in the construction of the canal.

UNIT VIII—China

A. PURPOSE OF THE UNIT

1. A comprehension of the geographic personality of China

The Republic of China is nearly as large as and has a population nearly three times as great as the United States, Mexico, Central American Countries, and Colombia combined. The dominance of high mountains, dry deserts and poor grasslands in Tibet, Sinkiang, and Mongolia has resulted in the concentration of population in China proper

where the better watered hillsides, alluvial plains, and a growing season varying from twelve months in southern China to about three or four months on the Manchurian Plain have made possible the raising of great amounts of sub-tropical crops in the south and middle-latitude crops in the north.

China is in such a chaotic condition politically, socially, and financially that years of careful thinking, planning, and acting will be required to bring about geographic adjustment that will put a great people of ancient civilization on the so-called high level of modern civilization.

2. Understandings of geographic interrelations

What items of the natural environment help to explain the following items concerning human life in China?

Rice being the chief food crop of southern China; wheat being more important than rice in the north; silk production in the Yangtze Valley and many small valleys in the south; tea in the uplands; millet, corn, sweet potatoes, apples, and pears in the north; cities of China Proper on the lowlands; no port at the mouth of the Hwang Ho; great cities near the mouths of the Yangtze and the Si rivers; farming more important than manufacturing in thickly populated regions; spread of education and modern progress slow; foreign business men interested in China; poor roads and few railroads; much brick used for buildings; cotton production increasing; Chinese migration to Manchukuo; Japan's interest in Manchukuo; Mongolia a land of nomads; agriculture in Sinkiang; modern development in some of the great cities.

Unit IX—Japan

A. Purpose of the Unit

1. A comprehension of the geographic personality of Japan

Japan, one of the leading countries of the world, has reached her high world ranking through the readjustments to the natural environment that the 60,000,000 diligent, energetic, and intellectual people of Japan Proper have made since contacts with Western civilization were forced upon them about three-quarters of a century ago. Although about five-sixths of the country is mountainous, farming is the principal occupation. The high yields of crops are due to scientific use of the soil and to careful hand tillage on the small farms which have been marked off on the warm, seasonally-watered alluvial plains. The expansion of the country commercially and politically and the development of a large merchant marine and a powerful navy are related to increase in population beyond the capability of Japanese agriculture to support; need for raw materials for manufacture, for food, and for foreign markets; and a worthy ambition to rank high as a nation in modern civilization.

2. Understandings of geographic interrelations

What items of the natural environment are related to the following facts about human life in Japan?

Sparse population in the north; dense rural population in many parts; large city of Osaka; Japanese skill in handicrafts; fish a chief food; much poverty in rural districts; much land used for rice production; tea, an export; stock raising, unimportant; raw silk, the chief export; raw cotton, a chief import; houses made largely of paper and bamboo; large city buildings now being made of structural steel and reinforced concrete; many Japanese sailors; many merchant vessels; a strong modern navy; large money investments in China; Japan being the first country to recognize the formation of the new country of Manchukuo, formerly the Chinese territory of Manchuria; large trade with the United States; one of the leading nations of the world; great cities of Tokyo and Yokohama.

B. Suggested Activities

Among the possible approaches to the geographic study of Japan are the following:

1. A current account of Japanese activities in Manchukuo out of which may come the question: Why does Japan desire to have access to the resources of Manchukuo?
2. A statement that one country of Asia has been called the "Great Britain of the Far East," and a question as to which country it is, followed by a search for evidence to justify or to refute the use of this name should bring to the fore some of the outstanding activities and characteristics of the Japanese.
3. A few recent statistics showing Japan as the leading Asiatic commercial associate of the United States may be used as a starting point.

Whatever the approach, the geographic thinking will come chiefly through finding by use of geographic tools how the Japanese are adjusting their lives to the items of the natural environment of their country.

Unit X—The Near East

A. Purpose of the Unit

1. A comprehension of the geographic personality of the Near East

The Near East, comprising the independent countries Afghanistan, Persia, Iraq, Arabia, and Turkey, and the mandated territories Syria and Palestine, extends over an area about two-thirds as large as the United States and has about one-third as many people. Nomadic people with their flocks and herds, scattered areas of winter-grown crops and irrigated farms, and meager transportation facilities between the more densely populated trading sections reflect the great areas of dry land and high land, medium winter rain and

summer drought, hot summers and cool winters. Petroleum in Persia and Iraq has, in recent years, brought international complications in that region.

2. Understandings of the interrelations between the life of people and the natural environment in the Near East.

What items of the natural environment explain, at least in part, the following facts in the life of people of the Near East?

In Palestine: Since ancient days people go "up" to Jerusalem and "down" to Jericho; farmers can raise three kinds of crops—winter, summer, and perennial tree; many boys herd sheep and goats; wheat and barley are threshed by trampling the grain out doors; more agricultural production is possible.

In Syria: Damascus is a large city on the edge of a desert; the greatest density of population is near the western border.

In Turkey: Crops like those of California are grown along the coast; Angora goats and other grazing animals are in the interior; wheat and barley are raised around the border of the interior plateau; Smyrna has a population about twice as large as Harrisburg, Pennsylvania; the city Adana is nearly as large as Harrisburg, Pennsylvania.

In Iraq: Irrigation agriculture is carried on; dates are an important crop; an air line extends from Bagdad to Beyrouth; cotton is produced; pipe lines are laid; part of Iraq is named Mesopotamia.

In Arabia: A sparse population; a few spots of medium density in population; robber nomads; milk and dates common articles of diet; mutton a food occasionally; a few camels and horses raised in some small areas.

In Persia: Farm villages with gardens and orchards; flat-roofed houses of dried mud; raising of cattle, sheep, and goats; caravansaries; wheat and barley without irrigation; Persian rugs; Teheran, a city with about a quarter of a million people; probably two million Persians living in tents.

In Afghanistan: A country backward in modern civilization; no railroads and few roads; hides, wool, tree fruits, and timber exported; textiles, sugar, and hardware imported; carpets, felts, and leather goods manufactured.

B. Suggested Activities

The Near East may be introduced by the story of Joseph to bring out the persistence of grain raising and wool production. A discussion of agriculture as it is practiced today will naturally follow.

Current items on the Zionist Movement that deal with work

activities in Palestine may be used to develop man's readjustment to the natural environment in Palestine.

UNIT XI—Africa as a Whole with Some Individual Attention to the Self-Governing Countries: Egypt, Ethiopia (Abyssinia), and Liberia

A. PURPOSE OF THE UNIT

1. Comprehension of the geographic personality of Africa as a whole

Africa, the continent second in area and fourth in population, lags behind the other inhabited continents in modern civilization. As a whole it is sparsely populated; a few small areas are densely populated but large regions have no inhabitants. Its approximate 140,000,000 people are chiefly producers of raw materials and foods, and actual or potential consumers of imported manufactured goods. These human conditions are related to the location of Africa athwart the equator, extensive areas with scant rainfall, large regions with high temperature accompanied by high humidity and excessive rainfall, and lack of unobstructed natural inland transportation routes. The more advanced civilization at the north and particularly at the south is noteworthy

2. Understandings of the interrelations between people of the various parts of Africa and the natural environment of those regions

What items of the natural environment explain, at least in part, the differences and likenesses named below?

a. Egypt and the Union of South Africa—approximately the same distance from the equator
Ancient civilization in one; but not in the other
Rural population concentrated in one; widespread in the other
Grazing of cattle and sheep of great importance in one; of little importance in the other
Intensive farming in one; extensive in the other
June, July, and August least enjoyable temperatures in one; most enjoyable in the other
Mining of little importance in one; considerable importance in the other
Cotton production of high importance in one; little importance in the other
Much irrigation in one; comparatively little in the other
No lumbering industry in one; a little lumbering in the other
Little manufacturing in both

b. Algeria and Union of South Africa
Population densest near the coast in both
Winter crops raised in both
Grazing industry important in both
Wine exported from both
Sparse population in the interior

c. Northern half of French West Africa in comparison with Southwest Africa and western Bechuanaland
Sparse population
More people near the coast than in the interior
Railroads extend part way into the interior of each
Caravan routes across one region but not across the other

d. Abyssinia and Liberia—in approximately the same latitude
Raising of cattle, sheep, and goats important in one; of little importance in the other
Wheat in one but not in the other
Some cotton produced in both
Rubber produced in both, but more attention given to it in one than in the other
People more energetic in one than in the other

e. Uganda and Kenya in comparison with Belgian Congo—both athwart the equator
Production of wheat is important as a food crop in one, but not in the other
Exports of hides and skins from one are important, but not from the other
Both areas produce coconuts and some cotton
Cedar wood is an important export from one, but not from the other

B. Suggested Activities

The nearness of Egypt to southwestern Asia and the associations in historical geography between the two areas suggest an approach to the study of Egypt. The similarities between Egypt and the Union of South Africa in latitudinal location but dissimilarities in the life of the people may be used to emphasize the fact that similarity in more than one item of the natural environment is needed to bring about similarity in man's choice of how to make a living.

The comparisons and contrasts between regions in similar latitudes suggested in A-2 should pull together the concept of Africa as a whole.

Unit XII—Middle America

A. Purpose of the Unit

1. Comprehension of the geographic personalities of three divisions of Middle America

Mexico is primarily an agricultural country although it ranks high in mineral resources. Cattle grazing, some irrigation agriculture, tropical agriculture, and mining are responses to semi-arid and arid plateau, hot, wet plains, and resources of ores and petroleum.

Mexico's problems include increasing literacy of the great mass of her people and educating them so that each family may use land more efficiently, receive the benefits of its labor, and raise the standard of living. The country's leaders are endeavoring to do these things.

The Central American countries are six independent nations and one British colony occupying the comparatively narrow land connections between Mexico and South America. Three quite distinct areas of natural conditions are reflected in the contrasted human life in the Atlantic Coastal area, the high mountain area, and the Pacific Coast.

The West Indies, groups of islands lying in the tropical area between Florida and South America, have a high percentage of colored people, descendents of negroes who were imported in the early days of European ownership. Spanish language, traditions, and customs are still evident among the people except in Jamaica. Foreign capital has been attracted to the islands.

2. Understandings of geographical interrelationships

How are the following facts about human life in Middle America related to items of the natural environment:

Cattle grazing in northern Mexico; cotton growing on the plateau; densest population in central Mexico; manufacturing cities in central Mexico; large haciendas; production of fruit and vegetables near the head of the Gulf of California; vegetable growing along the eastern side of the Gulf of California; much mining; growing henequen in Yucatan; growing corn in central Mexico; many poor farmers; adobe huts as homes for peons; the growth of Vera Cruz; the growth of Tampico; Monterey; Orizaba; Guadalajara; sparse population in the Atlantic area; banana plantations; locations of capital cities; production of cacao, mahogany, and chicle; export of coffee; sugar cane along the Pacific Coast; tortilla, a chief article of food; small mules used as beasts of burden; revolutionary uprisings in each country; dominant sugar production in Cuba; tourist industry in Cuba; poverty and unstable government in the Dominican Republic; dense population in Barbadoes; tobacco raising in western Cuba; grapefruit exports from Cuba to United States; Habana, a large city; purchase of Virgin Islands by United States; considerable foreign trade of Jamaica; British, French, and Dutch interests in the West Indies?

Unit XIII—Atlantic Countries of South America

A. Purpose of the Unit

1. Comprehension of the geographic personalities of each of the three countries: Brazil, Uruguay, Argentina

Brazil, larger than the United States but with less than one-third as many people, has three prominent geographic areas:

a. the Amazon Lowlands

b. the Mato Grosso Area

c. the Eastern Highlands and associated valley and coast plains

Uruguay, the smallest independent country of South Amer-

ica, owes its independence partly to its natural setting; namely, the broad waters of the Atlantic and Rio de la Plata on the east and south, the Uruguay River on the west, and the highest part of its area on the north so that the easiest access to the country has been from the south where one fairly good location for a port is available. The herding industry dominates the country due partly to (1) the ownership of the land in large estancias and (2) land surface and climate favorable to the grazing of cattle and sheep.

Argentina, with area and population about one-third of those of Brazil, is a leading country of Latin America and stands first in foreign trade. Four large natural areas with distinctive human adjustments are evident: the Pampa; Patagonia; the arid west; the hot, moist northeast, including the Chaco and Argentine Mesopotamia.

2. Understandings of geographic interrelationships

What factors in the natural environment aid in explaining these human items?

In Brazil: Coffee, the chief money crop; cacao, tobacco, and cotton as commercial crops; corn, beans, cassava, and bananas as food crops; cattle raising; some towns among the mountains; manufacturing in Rio de Janeiro; water power available; general farming in southern Brazil by European immigrants; cattle herding in Mato Grosso Area; quality of cattle higher in Paraguayan border than in the Campos area; population in northern Brazil, sparse and strung along the streams; population of Brazil unevenly distributed; nearly half the people of South America in Brazil.

In Argentina: Wheat, the chief crop of the country, produced chiefly in the western half of the Pampas; wheat sown mostly between May and August; large machinery on the farm; manufacturing; railroad mileage small outside the Pampas.

In Uruguay: Meat, wool, and hides the chief exports; some wheat and corn raised in south; little manufacturing; high per capita foreign trade.

Unit XIV—Pacific Countries of South America

A. Purpose of the Unit

1. Comprehension of the geographic personalities of Chile, Peru, and Ecuador

Chile has three distinct large regions—northern, central, and southern—with climatic differences particularly noteworthy. Each region has its outstanding adjustments distinct from the other two. The great Andean Highland is a prominent, natural feature of the west-coast countries that has had great influence on the activities of the people.

Peru also has three large distinctive geographic regions in each of which the life of the people is conditioned largely

by the peculiar natural environment; namely, the Pacific coastal region, the region of high mountains and plateaus, and the eastern plains.

Ecuador, though small, resembles Peru in the three areas based chiefly upon land surface; but its coastal region is rainy with an accompanying distinctive human adjustment to that factor.

2. Understandings of geographic interrelations

What items of the natural environment explain, at least in part, the following human items?

In Chile: Mining in northern Chile; no large port developed, but many small ports in northern Chile; lighterage along the coast; all materials for food, clothing, and shelter brought into northern Chile; production of wheat in Chilean Valley; vegetable growing in winter in Chilean Valley; fruits similar to those of California; irrigation agriculture; oats, potatoes, and barley in southern part of Central Valley; sheep industry in Tierra del Fuego; lumbering possibilities; growth of Valparaiso, Santiago, Concepcion, Magallanes (Punta Arenas), Antofogasta, Iquique; government financial troubles; future stability of government.

In Peru: Commercial production of sugar and cotton; the irrigation works comparatively simple; many small towns near the coast and large unpopulated areas between them; many small seaports; production of many crops for home use; corn, wheat, barley, and potatoes the chief crops of Central Peru; the llama, a chief means of transportation; few modern transportation routes; a few very expensive railroads and roads; few people in eastern Peru; sugar, bananas, cacao, and rubber produced in eastern Peru; sugar exported in raw state; Peru sparsely populated.

In Ecuador: Exportation of cacao; the capital city located among the high mountains; manufacture of Panama hats; production of rice, sugar, and cotton; production of wheat, corn, barley, and potatoes in central Ecuador; population of Ecuador in the western half of country; Guayaquil, the largest city located on the western coast.

Unit XV—The Interior Countries of South America

A. Purpose of the Unit

1. Comprehension of the geographic personalities of Bolivia and Paraguay

Bolivia and Paraguay are similar in that neither country has a seacoast, each has territory in the Gran Chaco area, and each has its population in sections distant from the Gran Chaco.

Bolivia differs from Paraguay in being much larger and having a great plateau area on which most of the people live, as well as a very large area of hot lowlands.

2. Understandings of geographic interrelations

What items of the natural environment explain, at least in part, the following human interests?

Few people live in the eastern and northeastern half of Bolivia, and the western part of both Paraguay and Bolivia; medium population in some parts of the western highlands; minerals the chief export; expensive mining; herding the chief occupation of the natives, Indians; economically poor farmers; difference in agricultural products of eastern Bolivia and western Bolivia; houses of well-to-do descendants of Spanish people made chiefly of stone; Indians' houses chiefly adobe; corn and manioc the chief crops of Paraguay; some rice, sugar, and tobacco produced in Paraguay; raising of beef cattle important in Paraguay; boundary dispute between Paraguay and Bolivia.

Unit XVI—The Caribbean Countries and Adjoining European Outlying Areas

A. Purpose of the Unit

1. Comprehensions of the geographic personalities of the countries bordering on the Caribbean Sea

With an area nearly ten times as great as Pennsylvania, Colombia has only about four-fifths as many people, of whom a comparatively few are educated, own productive land, and are accustomed to a high standard of living. Illiterate Indians, negroes, mulattoes, and mestizos far outnumber the literates. A large percentage of the population is in the interior of the country where the slopes, plateaus, and valleys of the high Andes Mountains in low latitudes are accessible from coastal lowlands by way of the stream valleys. These items of the natural environment help to explain farming in vertical zones, tropical types at the lowest levels, and tundra types at high elevations.

Ore deposits and a few veins of coal have encouraged mining which, with available water power, has aided manufacturing. The resources of the country are little developed, partly because of the mountain and climatic barriers to modern transportation facilities.

Venezuela is a nation in which a high percentage of the 3,000,000 people are illiterate Indians and mestizos who farm the land owned by a compartively few educated, aristocratic people of Spanish descent. The county has four distinct regions.

The three Guianas, the only European colonies on the mainland of South America, are sparcely settled, largely because of the enervating effects of the hot, wet climate. The people, consisting of about 500,000 negroes, Japanese, Chinese, Hindus, native Indians, and a few Europeans live mostly near the coast where the winds from the ocean cool somewhat the flat lowlands. This land is utilized for the growing of tropical crops, of which a few are exported chiefly to the European owners. The interiors of these colonies—

much dissected and forest-covered highlands—are inhabited by primitive native Indians and descendants of former negro slaves.

2. Understandings of geographic interrelationships

What items of the natural environment explain, at least in part, the following human interests?

In Colombia: Small population along the Pacific Coast; few people in the eastern half; coffee growing; small railroad mileage; densest population in central part; banana exportation; combination railroad-and-boat route to interior; establishment of airplane routes; subsistence crops of wheat, barley, and potatoes; exportation of hides; poor quality beef; comparatively low density of population; population increasing in the northeastern part of the county; location and growth of the capital city; Barranquilla, Puerto Colombia, Cartagena, Medillin.

In Venezuela: Coffee an important commercial crop; small steamboats on Lake Maracaibo; sugar plantations around Lake Maracaibo; production of such crops as corn, cotton, bananas, tobacco, cacao, and coconuts; transportation by donkey pack trains; building of pairs of cities, such as Caracas and LeGuaira; cattle raising on llanos; low quality beef; fewer people in Venezuela than in Colombia; most of the population in the northwestern part of the country; few people in the southeastern half.

In the Guianas: Agriculture, the chief occupation; some mining; some lumbering; crops such as sugar, rice, coconuts, yams, and bananas; rubber and balata exported; few Europeans; polder system of agriculture; sparse population.

Unit XVII—The Polar Regions

A. Purpose of the Unit

1. Comprehension of the geographic personalities of the Arctic Region and the Antarctic Region

The Arctic Region is a water region almost surrounded by land; the land varies in altitude with lowlands predominating. Permanent habitations as well as partial nomadic life characterize the geography of this part of the earth.

The Antarctic Region is a land area much of which has considerable high elevation and is dominantly a land of ice and snow.

B. Suggested Activities

Bring out the types of life in the Arctic with adjustments that result from the natural environment in specific locations, such as Alaska, North Greenland, Lapland, Northern Siberia.

For Antarctica follow the explorations of Byrd, Wilkins, and other explorers.

UNIT XVIII—A Panorama of the Earth

This unit should be a strengthening of the concept of the world in the large. Printed maps and outline desk maps should be used to build up the pattern of the earth as given in the last part of the outline of units for the seventh year.

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D. MAPS

Political wall map of the world on an equal-area, or nearly equal-area, projection.
Physical-political wall map of North America.
Physical-political wall map of South America.
Physical-political wall map of Asia.
Physical-political wall map of Africa.
Physical-political wall map of Australia and New Zealand.
World wall map showing rainfall.
May to October.
November to April.

E. PICTURES

Keystone "600 Set" of stereographs and lantern slides.
Pennsylvania State Museum catalog of lantern slides (available for cost of transportation only).

EIGHTH YEAR

GENERAL SURVEY FOR THE YEAR

The functioning citizen, young and old, needs a thorough understanding of the geography of the local district, the county, and the state in which he lives as well as that of his country. A sufficiently complete and accurate understanding of the local and Pennsylvania state geography requires a series of complex learning situations. Such experiences are essential at the junior high school educational level. Materials for information along these lines are not readily accessible; yet the habit of desiring to find and of searching until they are found should be formed at the junior high school level with the hope that the habit of keeping-up-to-date in knowledge of local, county, and state as well as national and international geography will continue throughout each citizen's adult life.

With the completion of the geography work in the seventh year, the students have secured a world view of a comprehensive type. Now they are prepared to study a region whether it be a natural region or a nation placed in its relation to the world natural environment. On the basis of functional value the specific region selected to be studied first in its world relations would logically be the homeland. The United States has already been studied from the viewpoint of man's distribution and his activities as these are related to the natural environmental conditions within the United States. Through this previous study in the fifth year, the geographic individuality of the United States has been developed. Now, the student is ready to build on that understanding of the United States and to develop a concept of the United States in its world relations; that is, an under-

standing of the work pattern, the population pattern, and ways of living in the United States as they are related to the natural environmental pattern of the world. This integrating thread must be kept in mind by the teacher throughout the course.

Anyone of the following sequences of work may be used for the eighth year: (1) local district and county, Pennsylvania as a State and in its world relations, and the United States in its world relations; (2) Pennsylvania as a State and in its national and world relations, the United States in its world relations, local district and county; (3) the United States in its world relations, Pennsylvania as a State and in its national and world relations, local district and county including their national relations.

UNITED STATES IN ITS WORLD RELATIONS

I. Major Objectives*

A. Major Understanding

The major understanding to be gained is that the great variety of activities going on in the United States is related not only to the natural conditions within the country, such as its vast areas of good arable farming land, the quantity and variety of its natural resources, and its large size, but also to the natural conditions in other countries of the world and the utilization of natural resources in other parts of the world.

Such an understanding on a world basis is composed of a large number of minor understandings. For instance, cotton is our most important export; it consequently brings us into relations with many other lands. The raising of cotton in southeastern United States is related not only to natural conditions in that region, but also to conditions in other lands. If only enough cotton were raised to supply the home demand, cotton raising would not be such an important activity in the United States. But the fact that Great Britain, Germany, Japan, and France buy large quantities (in the period 1924-1929 an average of 57% of the cotton crop went abroad) makes cotton raising a more important work activity. Their purchase of raw cotton is related to their climatic conditions; other natural resources, such as coal and water power; their position on an ocean highway; and other factors both natural and cultural. Furthermore, cotton raising in southeastern United States is related to conditions in other cotton raising lands for, if conditions had made possible the production of more or less cotton in such lands as Egypt and India, there would have been a reaction upon the amount of cotton produced in the United States.
It is recognized that factors other than items of natural environment enter in. For example, the low price of cotton in 1932 was related to the world-wide depression, the political unrest in India, and the Chinese boycott of Japanese goods.

Other activities in the United States could not be carried on as they are today if the United States were unable to se-

* National Society for the Study of Education, Thirty-second Yearbook, "The Teaching of Geography," pp. 268-271. Public School Publishing Company, Bloomington, Illinois.

cure certain products from other parts of the world. But man's adjustments to his natural environment in the United States are related to other regions of the world not only through his work activities, but also through his cultural and racial inheritance and contacts.

The above gives an idea of the types of understanding to be developed through a study of the United States in its world relations.

B. Major Abilities

1. Increased ability to secure information concerning human and natural conditions from actual landscapes, pictures, maps, models, specimens, word matter, graphs, statistical tables, and diagrams
2. Ability to recognize in actual landscapes or pictures any natural or cultural conditions necessary for gaining understandings concerning the relationships between man's activities in the United States and environmental conditions in other parts of the world
3. Ability to secure information and to make inferences concerning probable relationships from the following types of maps which perhaps have not been used before:
   a. Topographic maps
   b. Temperature and pressure maps
   c. Weather maps
   d. Land use maps
   e. World trade and trade route maps
   f. Harbor maps
   g. Large scale maps of small areas
4. Ability to secure information and to make inferences from such information from varied types of graphs especially the more difficult types, such as the circle and combination or composite graphs
   The combination graph is one on which several items of information are shown.
5. Ability to read facts of geographical significance from a greater variety of as well as complicated statistical tables; the ability to make inferences and raise geographical problems from such tables
6. Increased ability to express (in graphic form) information gained from statistical tables
7. Ability to express diagrammatically information and ideas gained from maps
8. Ability to see the relation of a major ocean trade route to the shape of the earth and the relative position of the great land masses (great circle routes)

C. Habits

1. The habit of using a variety of sources of geographic information and of comparing and checking one against the other
2. The habit of forming tentative conclusions concerning policies of the community, state, and nation when the questions

involve man's adjustments to natural environment and of holding these conclusions as tentative until all available, reliable data are examined

D. Major Types of Attitudes and Appreciations

1. An appreciation of the economic and cultural interdependence of regions and peoples. Such an appreciation is not possible until the student has a comprehensive world understanding developed in the seventh year. It comes only through investigating a number of concrete examples of interdependence in all their interrelationships.
2. A greater sympathy and understanding for peoples based on a realization of how their political and economic problems are bound up with conditions in various parts of the world as well as with conditions in the immediate natural environment
3. An increased interest and keener enjoyment in the reading of geographic and semi-geographical materials
4. An appreciation of the relation of the natural resources of any region to its position in world affairs

II. Materials

In this year, the teacher must use and train the student to use original source materials in securing information. Publications from the Bureau of Foreign and Domestic Commerce, from the Bureau of Mines, and from other United States governmental agencies should be secured and used freely. A catalog of materials may be secured from the Superintendent of Documents, Washington, D. C. Magazines, such as Economic Geography (published by Clark University, Worcester, Massachusetts), the Journal of Geography and the Geographical Review (American Geographical Society, New York City) are valuable in securing reliable up-to-date information.

Maps: Physical-political map of the United States
(Not Mercator Projection)
Blackboard outline map of the United States
Physical-political map of the world
(Not Mercator Projection)
Blackboard outline map of the world
(Not Mercator Projection)
Climatic map of the world—November 1 to April 30
Climatic map of the world—May 1 to October 30
Physical-political globe
Harbor maps of New York, Philadelphia, New Orleans, Los Angeles, Chicago, etc.
Topographic map of home community

III. Titles of Suggested Units*

Unit I. A Survey of Land Utilization in the United States

* The term "unit" is used in these suggestions to indicate blocks of subject matter. In organizing teaching units, teachers may wish to combine a number of these blocks. Experience has shown that the number of distinct units which can be developed adequately in any one year is relatively small.

Unit II. The World a "Family of Nations"

A. Everyday Evidences of Dependence or Why, from the Standpoint of Geography, no Nation Can Live in Isolation

B. A Map and Statistical Study of World Commerce

Unit III. The Nature, Origin, and Destination of the Exports of the United States or How the United States, in Part Because of Its Geography, Is Brought into World Relations through Its Exports. (Not all of the suggestions listed below need be developed. The teacher should select those suited to the pupils. The list given below is arranged in order of money value of the products involved.)

A. The Cotton Industry of the United States in Its World Relations

B. The Petroleum Industry in the United States and Its World Relations

C. The Manufacture of Machinery in the United States and Its World Relations

D. The Automobile Industry in the United States and Its World Relations

E. How the Raising of Wheat and the Manufacture of Flour in the United States Are Related to Conditions in Other Parts of the World

F. How the Packing House Industry of the United States is Related to Conditions in Other Lands

G. The United States Coal and Coke Industry in Its World Relations

H. The Iron and Steel Industry of the United States in Its World Relations

I. Summary of the Relationships Which Result from the Export Trade of the United States

Unit IV. The Nature, Origin, and Destination of the Imports of the United States or How the United States, in Part Because of Its Geography, Is Brought into World Relations through Its Imports. (The teacher should select from the following list the parts of the unit for development that are appropriate for the interests of the class. The list is arranged in order of money value.)

A. How and Why the United States Is Dependent upon Other Countries for Rubber

B. How and Why the United States Is Dependent upon Other Countries for Raw Silk

C. The Use of Coffee in the United States as Related to Conditions in Other Parts of the World

D. To What Extent and Why the United States is Dependent upon Other Regions for Sugar

E. The Paper Industry in the United States in Its Relationship to World Conditions

F. How the Fur Industry of the United States Is Dependent upon Other Regions of the World

G. How and Why the United States Depends upon Other Countries for Tin

H. Summary of Relationships Which Result from Import Trade of the United States

Unit V. Movements of the United States Trade

A. How the Transportation Facilities within the United States Have Been an Important Factor in the Development of Its World Trade as Well as Its Internal Development

B. How Ocean Trade Routes Are Related to the World Trade of the United States

Unit VI. Activities Other than Trade Which Bring the United States into World Relations

A. How the Population Pattern and the Complexity of Population in the United States Brings It into World Relations

B. How the Natural and Cultural Pattern of the United States Arouses an Urge to Travel, and the Resulting World Relations

C. How International Agreements Affect the United States in Its World Relations

D. Other Factors That Bring the United States into World Relations

Unit VII. Summary of the United States in Its World Relations. Especially from the Geographic Viewpoint

IV. Special Unit with Suggestions—(Unit III-A)

The Cotton Industry in the United States in Its World Relations

(See page 13)

A. Purpose

1. A comprehension of the major understanding to be acquired in the study of this part of the unit

   The study of the cotton industry in the United States should lead to a realization (1) that the United States leads the world in cotton production; (2) that specific natural conditions make extensive growing of cotton possible; (3) that natural and human items have made New England the leading cotton textile district, but that there is a trend from this section toward the southern Appalachian region; (4) that the export of cotton is related to the amount produced in the United States; (5) that natural and cultural conditions in the United Kingdom, Japan, China, Germany, France, and Italy create a demand for raw cotton or cotton goods while they prohibit either any growing of cotton or at least a sufficient supply; (6) that our cotton exports are important in paying for our imports; (7) that competitive production of raw cotton is increasing in Africa and Asia; and (8) that our cotton farmers and our government should take into consideration both natural and human world conditions in formulating policies.

2. Understanding of the geographic relationships involved in the production of raw cotton in the United States and in our position as the leading exporting nation

a. The raising of a large quantity of cotton in the southeastern part of the United States is related to such natural conditions as (1) a growing season of six months or more, (2) 30 or more inches of precipitation coming chiefly in spring and early summer, (3) large areas of suitable soils and of a fairly level topography; and to such other factors as (1) abundant supply of fairly cheap labor, (2) a demand for cotton in New England and especially in western Europe and Japan, and (3) extensive transportation facilities.

b. The manufacture of cotton textiles in the New England States is related to such natural conditions as (1) falls in the rivers which made early use of water power possible, (2) location in respect to Atlantic Ocean and good harbors, (3) location in respect to coal deposits. Indirectly it is related to the development of the New England fishing industry and ocean trade throughout the world.

c. The importance of England as a cotton textile manufacturing country is related to (1) large coal resources; (2) the moist, mild, and rather even climate of the western part of the country; and (3) its easy access in all directions to highways. Indirectly it is related to the rearing of sheep and the early manufacture of woolen yarn and cloth.

d. Limited raising and exporting of cotton from Egypt in competition with the United States is related to the relatively small area of land which can be irrigated in Egypt.

e. It is of vital importance that many more relationships be developed, such as (1) limited export of raw cotton from India and China, (2) importance of cotton textile manufacturing in Japan, and (3) world demand for large quantities of cotton goods.

B. Suggested Activities

1. Approach

From the study of the graph showing our exports, we have learned that raw cotton is the leading export of the United States. As the leading export, it brings us into direct contact with the rest of the world. (Have the class read a composite graph showing the amount of raw cotton used in the United States and the amount exported.) If we ceased to export cotton, the whole agricultural set-up in our Southern States would be changed; furthermore, our foreign trade would be greatly reduced. We would be compelled to find some other way of paying for some of our imports.

You have learned in the fifth year that the raising of cotton is one of the chief kinds of work carried on in the Southern States. The reason for this is in part the fact that the temperature, precipitation, soil, and topographical conditions in many sections of the Southern States are favorable for the growth of cotton.

But not nearly so much cotton would be raised and consequently cotton raising would not be a leading kind of work in the Southern States if there were not such a large demand for raw cotton in other lands. According to this graph what percentage of the cotton crop is exported? According to this second graph (a graph showing the destination of the raw cotton exports in bales and percentage) to what countries does our raw cotton go? This means then that cotton raising in the Southern States is related also to conditions in other lands.

2. Development

The following is a suggested list of problems and activities. Additional details in the way of assimilative questions, etc., are needed.

a. Why is cotton one of the leading agricultural products of the United States?
b. How is the cotton crop used in the United States?
c. Why is Great Britain our chief customer?
d. Who has become our second best customer? Why?
e. Why is Japan an importer of cotton?
f. Why are France and Italy the other two important customers?
g. Summarize the relations existing between the cotton raising industry in Southern United States and these five importing countries.
h. How is our cotton growing industry related to the cotton growing industry in other countries?
i. How is the marketing of our raw cotton, consequently the manufacturing of cotton goods, related to natural environmental conditions in other lands?
j. How is the cotton growing industry related to the trade routes of the world?
k. In view of what we have learned in this unit, why may the cotton producing and manufacturing districts of the United States be considered major economic regions?

3. Culmination

Summarize in a paragraph the interrelations of cotton growing in the United States and the rest of the world. Find illustrations in recent or current events of the relationships brought out in this part of the unit.

C. Evidences of Pupil Growth

1. Increase in ability to apply knowledge of geographic relationships to life situations and problems

a. Explain the significance of each of the following newspaper items to the southern cotton farmer:

(1) "Factors in the decline of cotton have been the increasing use in the Orient of Indian and Egyptian

cotton and the consequent falling off of exports of American staple."

(2) "World production of cotton this year was estimated today at 23,400,000 bales, the smallest yield since 1923-24."

(3) "Those who are watching keenly for any definite signs of improvement in industrial affairs will note with satisfaction that Lancashire is beginning to admit that things are not quite so bad as they were, where cotton is concerned." Why Lancashire? "Any improvement in this direction can hardly fail to be reflected not only by the many other industries of Lancashire, but by the business of Great Britain as a whole, and eventually, it may be added, by the business of the world." Why?

b. If you had sufficient capital to invest and were interested, would you become a cotton planter? If so, where would you locate? What type of cotton and on what scale would you produce? Give reasons.

c. Over a period of a week or more save the cotton notes from newspapers and magazines. In the light of what you have learned interpret the news items.

2. Probable additions to and strengthening of vocabulary

"alongshore trade"	finishing plants
baling	"futures"
boll weevil	ginning
"chopping out"	Piedmont
compressing	"sledding"
cotton boll worm	spinners market
	"spot" market

3. Locational geographical concepts

Each pupil should be able to recognize the site and situation of the leading cities, countries, and continents used in the study

On an outline map of the United States the pupil should be able to indicate by shading or some other appropriate symbol the leading three cotton producing regions in the Southern States and associated natural conditions, such as precipitation, relief, length of growing season; the leading two textile manufacturing regions with associated natural conditions.

On an outline map of the world the pupils should be able to indicate with appropriate symbols the following: the raw cotton regions in India, Africa, China, Russia, South America, and North America; the leading textile manufacturing areas in the United Kingdom, France, Germany, Italy, and Japan; the movement of world trade in raw cotton. They should insert natural conditions when possible.

4. Specific abilities, habits, and skills strengthened
   a. The habit of turning to geographic tools for the interpretation of current events discussing any phase of the cotton industry in the United States
   b. The habit of using the United States Commerce and Agriculture Yearbooks and the Statistical Abstract and other governmental publications as sources of information
   c. Skill in the use of the globe and world maps in tracing trade routes and shipments of cotton
   d. Ability to read significant facts concerning cotton production and trade from graphs and statistical tables; and to raise, in terms of those facts, pertinent geographic problems
   e. Ability to express in graphic form statistical facts concerning cotton production and trade
   f. Ability to discern the steps to be taken in the problem raised, that is a realization that the interpretation of the major facts noted involves: (1) an analysis of the origin and destination of raw cotton as well as the cotton textiles of the United States and (2) an analysis of those cultural and natural conditions in both the raw cotton producing regions and in the textile manufacturing regions that are the bases for the United States' trade activity in raw cotton
   g. Ability to express accurately relationships between the United States' production and trade in cotton, and the natural and cultural bases for them
   h. Knowledge of the major movements of United States cotton: areas of origin and destination, location and relative importance of the routes used, and the ports used
   i. Ability to read facts concerning the production of United States' cotton from the landscape, such as recognition of a cotton field at different stages of growth and recognition of signs of a cotton port

5. Desirable feelings, attitudes, and appreciations
   a. A keener appreciation than had been acquired in the fifth year of the relationships between raw cotton production, cotton goods manufacture, and natural environmental conditions in the United States
   b. An appreciation of the dependence of thousands of cotton farmers in the United States upon conditions in other lands and the indirect dependence of thousands of others because of the prosperity or poverty of the cotton farmers
   c. An appreciation of how political unrest in a country, such as India has far reaching effects upon activities in other lands such as our own South.

D. Suggestions for Testing

In addition to the following type of true and false test, other tests such as multiple choice and association may be used. Tests based on maps and graphs also should be used.

Test on Cotton Unit

In the following test, answer everyone of the numbered groups of words. If the statement is true, precede it by a plus symbol (+); if false, by a minus symbol (—).

Type A

This cotton producing area lies between the Appalachian highland and the sandy coastal belt. In general, the land is level enough for cultivation although along streams the slopes are steep. The soils vary greatly in quality but over large areas they are of high fertility. As this is the oldest section of the cotton belt, large quantities of fertilizers are used to increase the productivity of the soil. In some instances the cotton is grown on large plantations but in most places it is grown on farms of moderate size, which are worked by the owner or by croppers tilling the land on shares.

The above is a description of the—

1. Mississippi Valley cotton district.
2. Piedmont cotton producing region.
3. Texas prairie cotton region.

The annual rainfall in this region is—

4. more than 30 inches and less than 60 inches.
5. less than 20 inches.
6. so low that irrigation is practiced.

The length of the growing season is—

7. more than 200 days.
8. 180 days or less.

The cotton from this region is marketed—

9. chiefly by steamers on rivers.
10. by coastwise vessels.
11. by railroad.

One of the chief ports for this cotton producing area is—

12. Houston.
13. New Orleans.
14. Savannah.

Type B

This city is located at the innermost point of the great northwestern curve of the Gulf of Mexico; this location makes it the nearest port on the Gulf of Mexico to the great Black Prairie Belt of Texas. The city is—

15. Savannah.
16. Galveston.
17. Mobile.
18. New Orleans.

Type C

The cotton crop grown in our southern states—

19. exceeds that of any other country.
20. is produced chiefly for export.
21. is produced chiefly for its seed.
22. is produced chiefly where the frost free season is more than seven months.
23. is harvested chiefly with the use of machinery.
24. is planted in autumn and harvested in early summer.
25. is consumed on or near the farms and does not enter commerce.

Type D

This textile district uses some local raw cotton, for the district is situated in an important cotton-growing area. It has a large amount of water power as well as coal. It has a long, hot summer. The development of the textile industry in this district has been comparatively recent.

This description refers to—

26. the New England District.
27. the Manchester District of England.
28. the Piedmont District..

Type E

This cotton manufacturing district centering around one large city is the leading one in the world. It possesses water power and rich coal seams underlie the manufacturing towns. It contains approximately one-third of the cotton spindles of the world. This description refers to—

29. the Piedmont.
30. the Manchester District of England.
31. the New England District.
32. the Japanese District at Osaka.

Type F

This cotton producing area is located on a plateau between one and two thousand feet above sea level. The soil is a peculiar tenacious black spongy lava soil that retains water from the rainy season through the dry season. The rain comes in summer followed by a dry season. The soil is very fertile but production per acre is low because of the poor methods used.

This description refers to—

33. China.
34. the Piedmont. .
35. India.
36. the Sudan.

Type G

This cotton manufacturing region owes its development to such natural conditions as possession of water power, location

near the Atlantic coast, and a moist climate; and to such cultural facts as the early growth of the fishing and shipping industries, the early accumulation of capital, the invention of the cotton gin, the introduction of power machinery, and abundant labor.

These conditions are true of the—

37. Piedmont.
38. Manchester District of England.
39. French textile district in northern France.
40. New England.

TYPE H

This cotton producing area is a desert and the industry is dependent upon irrigation. The cotton produced is of high quality but not large in quantity. The industry is of comparative recent development in this region. It has a disadvantage of long distance from market and the movement is chiefly by railroad. Interested manufacturers have been instrumental in developing the production.

This paragraph refers to—

41. the Nile delta.
42. the Imperial Valley.
43. the Peruvian coastal desert.
44. the Sudan—Upper Nile.

The ability of the United States to maintain its position as the chief source of raw cotton for the world depends upon—

45. decreasing our production of cotton and raising the price per pound.
46. maintaining our production and lowering the price through more efficient methods of production and distribution.
47. limiting the acreage in the United States and securing a higher price in international markets.

The prosperity of the farmers in our Cotton Belt is dependent on—

48. the success of British textile factories.
49. the prosperity of the farmers of India and China.
50. the development of the cotton areas of Africa.

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E. MAPS

Climatic maps of the United States—Summer and Winter
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Physical-political map of Africa
Physical-political map of Asia
Physical-political map of Australia
Physical-political map of Europe
Physical-political map of North America
Physical-political map of South America
Physical-political map of the United States
Physical-political map of the world on the Goods Homolosine Projection
Slated outline map of the United States
Slated outline map of the world

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Films
- Cane sugar—2 reels 1641
- The wonders of anthracite—2 reels N 1642
- Story of rubber—1 reel 1654
- From seed to cloth—2 reels 1681
- The inside story of your telephone—2 reels 1133 (35 m. m.)
- Master road builders—2 reels 1175 (35 m. m.)
- Magic of the mountains (Coffee producing regions of South America) 1 reel 1617
- Oil tydings—4 reels (Petroleum) N 1683
- Laying the world's fastest ocean cable—2 reels N 1367
- Romance of rubber—2 reels 1676
- (Above films may be rented from the Motion Picture Bureau, National Council, YMCA, New York.)
- Anthracite coal—1 reel
- The automobile—1 reel
- Beet and cane sugar—1 reel
- Bituminous coal—1 reel
- Cattle
- Coffee
- Corn
- Cotton growing
- Iron ore to pig iron
- Meat packing
- Ocean liners
- Panama Canal
- Producing crude oil
- Range sheep
- Rubber
- Silk
- Transportation
- From tree to newspaper
- Weather forecasting
- (Above films may be rented from Eastman Teaching Films, Inc., Rochester, New York)

THE GEOGRAPHY OF PENNSYLVANIA AND LOCAL DISTRICT

A sufficiently complete and accurate understanding of the local and Pennsylvania state geography necessitates a series of complex learning situations inadvisable before the junior high school educational level. Therefore, a concentrated block of work has been assigned to the eighth year.*

Since many materials for information on the geography of Pennsylvania may not be readily accessible, achievement with these units of work challenges the resourcefulness of teacher and pupils. Many opportunities for "exploration and discovery" of materials are offered. During these activities, pleasure in searching until the desired goal is reached should be established. This goal should include a desire, which gradually should become a habit, of keeping up-to-date in the individual's knowledge of local, county, and state geography. This is one essential of each citizen's adult life.

The varied work and play pattern and population pattern in Pennsylvania are related to the natural items; namely, (1) features (mountains, rivers, soil) and (2) activities (erosion of unforested hillsides) and conditions (length of growing season) within the Commonwealth. These factors of the natural layout (environment or natural environmental complex) consist of five relief or topographic regions; several climatic regions; a great variety of soils; a complexity of mineral and water resources; and various and extensive forest lands that are present or potential. In part, the variety of human activities and conditions in Pennsylvania is also related to natural and cultural items (features, activities, conditions) elsewhere in the United States and in the world, in both producing and consuming areas.

A people may so emphasize its achievements that it will neglect its opportunities for improvement. A citizen may discuss with pride the magnitude of his state's steel industry yet be oblivious of the harm done by erosion and of the need for the reforestation of its hillsides.

The degree to which a given teacher and group of pupils will carry out the suggestions presented in this outline will, of course, depend largely on their specific abilities and the quality and variety of materials—maps, statistics, graphs, word matter, pictures, and specimens—which they will assemble for this study.

I. Major Objectives

A. A knowledge of the actual land uses, by regions, in Pennsylvania and the related natural environmental features, activities, and conditions

B. A knowledge of the distribution in Pennsylvania of the various natural factors and the relation of this pattern to the distribution and concentration of certain economic activities

C. A knowledge of the sources and skills in the use of tools from which geographic information concerning Pennsylvania may be secured

* Consult National Society for the Study of Education, Thirty-second Yearbook, "The Teaching of Geography." Public School Publishing Company, Bloomington, Illinois. 1933. Chapter X; Chapter VIII, esp. pp. 93-97; Chapter XVII esp. pp. 279-80.

D. An appreciation of the interrelations existing in Pennsylvania between man and the natural environment concurrent with an understanding of the value of the natural resources of Pennsylvania and the desire to assist in securing a wiser use of lands, waters, forests, soils, and mineral resources

E. An appreciation of the fact that this distribution and concentration of economic activities tends to make the people of Pennsylvania dependent upon the people of other sections of the United States and of the world for a part of the necessities and luxuries of life

F. An understanding of how such interdependence has resulted in a large flow of domestic and international trade

G. Accurate geographic concepts of such facts and relationships as will enable the individual to make fair judgments, and to form attitudes toward the advisable solution of current problems facing the people of Pennsylvania; such as the development of water resources and reforestation

H. A vitalization of the individual's travel and reading concerning Pennsylvania by increasing his power to understand the interrelations existing between man's work and play, and the natural environments of Pennsylvania

II. Geographic Tools

Materials dealing with the State, county, and local district may be introduced and used with great skill and efficiency during these units

A. Statistics and Graphs

1. Data of economics on primary, or extractive, transforming, transporting, and recreational activities
2. Natural environmental data on topography, climate, soil, water resources, mineral resources, natural vegetation, and wild animal life

B. Maps (previously prepared or evolved as needed)

1. Areas mapped
   Local district, county, Pennsylvania, United States, world as a whole
2. Information
   a. Land, water, and air uses for both work and recreation
   b. Specific patterns of topography, climatic regions, soil regions, forest areas, water resources
   c. Population pattern

C. Globe

Physical-political globe, also slated globe if possible

D. Pictures

Individual views and collections assembled according to the units suggested that show geographic relationships in local district, county, and State. Discriminatingly selected views where needed to establish omissions in previous learnings in United States or world geographic concepts

E. Cross Sections of Various Areas Previously Prepared or Evolved as Needed

F. Specimens According to the Specific Needs of the Pupil

G. Sources

1. State and Federal governmental publications as first choice
2. Private or semi-private industrial and business agencies
3. Individual persons in the local district and elsewhere

III. Titles of Suggested Units*

Unit VIII—Work Pattern or Commercial Land and Water Utilizations in Pennsylvania as Related to the Elements of the Natural Environment

A. Forest Lands

B. Fishing Regions

C. Agricultural Districts

D. Mining and Quarrying Regions

E. Manufacturing Regions

F. Transportation and Commerce Avenues

G. The Work Pattern as a Whole

1. Interrelations between the various sections of the Commonwealth
2. Interpretation of urban districts

H. Pennsylvania's National and International Trade

I. Summary of the Natural Landscape or Natural Environmental Complex of Pennsylvania

Unit IX—Pattern of Recreational Activities in Pennsylvania as Related to the Elements of Natural Environment

Unit X—Pennsylvania's Work and Recreational Pattern in Its Relation to Those Patterns of the United States and the Rest of the World

Unit XI—Population Pattern in Pennsylvania Interpreted Geographically, then Considered in Its Relation to the United States and World Patterns of Populations

Unit XII—The Geography of the Local District

A. Land and Water Utilizations or Work and Recreation Pattern of the District in the Regional Natural Environmental Pattern of the District

B. The District in Its Relation to the County and State

C. The District in Its Relation to the United States

D. The District in Its World Relations

Unit XIII—The Geography of the County

Analysis similar to that of the local district

It may not be possible or feasible for a given class to investi-

* The term "unit" is used in these suggestions to indicate blocks of subject matter. In organizing teaching units, teachers may wish to combine a number of these blocks. Experience has shown that the number of distinct units which can be developed adequately in any one year is relatively small.

gate all phases of the geography of Pennsylvania, local district, and county as indicated in these units. The teacher and pupils will select those phases for which material and interest exist.

IV. Suggestions for Development of Units

Unit VIII—Work Pattern in Pennsylvania as Related to the Elements of the Natural Environment

Forest Lands

If you should travel in an airplane over Pennsylvania east to west or north to south on several routes, you would see in some places many patches of trees and in other regions forests. Then why are logging and lumbering not important work activities in this State? What are possible future developments?

Forest areas on ridges of central and, to an extent, of northeastern Pennsylvania, with some agricultural land use in the valleys of these districts and on the Allegheny plateau are related to (1) broken topography; (2) more than thirty inches annual precipitation (in most regions, more than forty inches); (3) shorter growing seasons and fewer frostless nights and days in many of these areas than in southeastern, southwestern, and northwestern Pennsylvania, and (4) extensive sections of thin, rocky soils.

A. Allocation, nature of, and extent of
   1. Remaining virgin forests
   2. Districts reforested by
      a. State Department of Forests and Waters
      b. Schools, colleges, private corporations, and individual land owners

B. Forests versus woodlots

C. Relationships of forest lands to elements of natural environment in each major forest land region in Pennsylvania
   1. Northern versus southern sections
   2. Nine major forest types

D. Summary of entire forest pattern in Pennsylvania and of continuous forest lands in New York, West Virginia, and Maryland

E. Forest industries and other uses of these areas
   1. Tree crops
   2. Water and soil conservation
   3. Wild life preservation
   4. Recreative uses, such as hunting, fishing, travel, nature study.
   5. Preservation of scenic and historic sites

F. Possible use of Pennsylvania's forests
   1. Use of land for adequate and continuous wood supply
   2. Subsequent increase in Pennsylvania's forest industries
   3. Safeguarding and increasing water supply and wild life
   4. Greater facilities for recreation

G. Possible reforestation of cut-over land, abandoned and tax delinquent farm land, worn-out pastures, eroded banks, and other idle land not fit for cultivation

1. Kinds of trees to plant in relation to soil and moisture conditions
2. Advantages of such reforestation

H. Pennsylvania's forestry program as compared with policies elsewhere in the United States and the world

Fishing Regions

To what extent does commercial fishing exist in Pennsylvania? Why does it not exist in all the bodies of water of the Commonwealth? Why can and should the waters of Pennsylvania be used more extensively for recreational purposes?

A. Commercial fishing only in Lake Erie
   1. Kinds: chiefly blue pike, white fish, yellow perch
   2. Amount: more than two and one-half million pounds in 1932
   3. Advisable program for these waters as to
      a. Fish replacements
      b. Prevention of pollution
      c. Abstraction of water from Great Lakes by Chicago

B. Possibilities for fishing throughout Pennsylvania
   1. Classification of Pennsylvania's streams (entire extent one hundred thousand miles)
   2. Contributions of fish hatcheries
   3. Commercial versus recreational fishing in Pennsylvania as related to the natural environmental and population pattern of the State

Agricultural Districts

What geographic relationships are involved in these districts? For detailed analysis consult special unit with suggestions, page 164.

Mining and Quarrying Regions

How does geography help to explain Pennsylvania's prominence as a producer and user of mining and quarrying products? *

A. Quarrying Areas in Pennsylvania
   1. Sandstone districts in southeastern and western Pennsylvania as related to
      a. Extensive sandstone deposits
      b. Their favorable quality for building purposes and use in significant Pennsylvania manufacturing industries
   2. Slate, granite, and trap rock districts in southeastern Pennsylvania (the Piedmont and the eastern extremity of Ridge and Valley Region) as related to
      a. Concentrated and scattered deposits
      b. Proximity to dense population areas
   3. Clay, sand, and gravel districts well scattered over the State with the exception of the northern tier and south central tier of counties, but most predominant in the Pied-

* Phases of study might include also the quantities of production, rank of Pennsylvania's production in United States and world production, uses of the products, and probable future of the industry.

mont Region and Allegheny Plateau as related to elements in the natural environment
4. Other kinds of quarrying products and associated areas interpreted geographically
5. Statistical comparison of production in Pennsylvania's quarrying industries with those elsewhere in the United States

B. Petroleum producing areas in the Allegheny Plateau chiefly north and east of Pittsburgh as related to
1. High grade oil deposits
2. Position of deposits between horizontal rock strata relatively close to surface of land
3. Relatively easily penetrable strata for drilling
4. Proximity to large consuming areas

C. Natural gas mining in western Pennsylvania (Allegheny Plateau) as related to
1. Frequent coexistence of petroleum and natural gas deposits or coal and natural gas resources
2. Rather wide distribution of gas sands over western Pennsylvania
3. Proximity to manufacturing districts

D. Coal mining areas in the Allegheny Plateau and Ridge and Valley Region
1. Bituminous coal mining in western and central Pennsylvania as related to
   a. Numerous and extensive beds of high-grade bituminous coal in horizontal layers at varying depths in relation to the earth's surface, hence shaft and drift mining, and in some cases, exposed by stream erosion for slope mining
   b. Its excellent quality for coke manufacturing
   c. Its high gas content
   d. Availability of water transportation
   e. Comparative proximity to adjacent consuming areas in many cases
2. Anthracite mining in eastern Pennsylvania as related to
   a. Large deposits of anthracite of commercial value in folded and twisted layers at varying depths from the earth's surface and in outcrops
   b. Special advantages of anthracite coal for heating residences
   c. Proximity to large consuming areas
3. Manufactured gas industry and work activities other than mining associated with the immediate mining localities, both anthracite and bituminous localities, such as generation of electricity
4. The coal mining pattern of Pennsylvania
   a. More scattered pattern of the bituminous activity than of the anthracite activity as related to
      (1) Position of coal deposits in each case
      (2) Absence of impurities in bituminous coal that

must be removed after mining as is the case in anthracite coal

b. Closer immediate association in general of producing and large consuming areas in eastern Pennsylvania, than in western section

E. Adjustments developing as results of State, National, and World Planning in the fields of mining in Pennsylvania

Manufacturing Regions

How are the manufacturing regions related to the factors of the natural environment?

A. The manufacturing regions

B. Nature of each region
   1. Variety and quantity of production
   2. Consuming areas.
      a. Within the State
      b. Elsewhere in the United States
      c. Elsewhere in the world

C. Comparison of various major types of industries over the State as a whole based on
   1. Number of employees
   2. Value of manufactured products
   3. Other bases

D. Trends and tendencies in Pennsylvania as to changes in location and type
   1. Movement of heavy type industries from larger population districts to less densely populated areas and frequently also to a nearer source of raw materials
   2. Greater variety in types of manufactured commodities produced in a given district
   3. Adjustments developing as results of State, national and world planning

Transportation and Commerce Avenues

How do transportation and commerce in Pennsylvania show evidences of adjustment to or disregard for the elements of natural environments?

A. Transportation and commerce by physiographic regions: focal areas and associated traffic lanes of railroads, highways, waterways, air lines, and whenever possible, major commodities carried
   1. Southeast Coastal Plain and Piedmont
   2. Ridges and valleys
   3. Dissected Allegheny Plateau
   4. Erie Lake Plain in the northwest

B. Analysis of transportation pattern of major traffic lanes throughout Pennsylvania in natural environmental pattern of the State
   1. Railroads (rank order based on total number of miles operated in Pennsylvania): Pennsylvania, New York Central, Baltimore & Ohio, Erie, Lehigh Valley, etc.

2. Highways: Primary and secondary
   a. Routes as related to natural environment and economic areas
   b. Nature and where possible, volume of traffic
3. Waterways (with recall of associated railroads and canals of the valleys): position of these traffic lanes and volume and nature of traffic as related to the natural environmental and economic complexes of the Commonwealth and adjacent territories
4. Airways
   a. Specific routes in relation to relief, climate, and population patterns of Pennsylvania
      (1) United Airways of America
      (2) Transcontinental and Western Air Lines
      (3) Pennsylvania Air Lines, etc.
   b. Nature and volume of traffic

C. Adjustments developing as results of State, national, and world planning

THE WORK PATTERN OF PENNSYLVANIA AS A WHOLE

How can the diversity and allocation of Pennsylvania's work activities be interpreted geographically?

A. Summary of land and water utilizations or patterns on the basis of the following regions: Piedmont, Ridge and Valley Section, Allegheny Plateau, Erie Lake Plains
   1. Integrated work pattern in each region including interpretation of urban districts: Philadelphia, Harrisburg, Pittsburgh, Erie (others if time permits)
      a. Facts of human aspect as they deal with
         (1) Density of population
         (2) Scope and intensity of work activities, especially industries
         (3) Transportation and consumption phases
         (4) Relation to the "hinterland"
      b. Related factors of the natural environment
         (1) General environmental situations
            (a) Topography or relief
            (b) Weather and climate
            (c) Water resources
            (d) Soil and drainage
            (e) Mineral resources
            (f) Native vegetation and fauna
         (2) Local site, as relief and climate

B. Variety and location of work and recreational activities (where possible, recall associated commodities) of the entire State

C. Comparative analysis of all work and if possible, of recreation activities in the State on a basis of
   1. Number of employes
   2. Amount of production

3. Type of product, quality if feasible
4. Other bases, such as acreage

D. Adjustments developing as results of State, national, and world planning

PENNSYLVANIA'S NATIONAL AND INTERNATIONAL TRADE

A. National trade
   1. Rank of Pennsylvania in national trade and interpretation thereof in terms of the various natural environments involved
   2. Nature, origin, and destination of the major exports from Pennsylvania to other parts of the United States
   3. Nature, origin, and destination of the major imports into Pennsylvania from other parts of the United States

B. International trade
   1. Nature, origin, and destination of major exports from Pennsylvania to foreign countries
   2. Nature, origin, and destination of major imports into Pennsylvania from foreign countries
   3. Rank of Pennsylvania in the international trade of the United States

Summary of the Natural Landscape or Natural Environmental Complex of Pennsylvania:

Organize several real or imaginary walking, automobile, railroad, and airplane trips across our State so that the children can discover as accurately as possible, the bounding or division lines of each of the physiographic and climatic regions, drainage systems, and forest regions. Cross section studies are functional here.

List in connection with these trips, places of unusual natural features, such as caves and underground waters, springs, waterfalls, game preserves and refuges, and mountain top views.

UNIT IX—Pattern of Recreational Activities in Pennsylvania as Related to the Elements of Natural Environment

In what ways do recreational activities and regions show evidences of adjustments to the natural environmental complex?

A. Recreational activities according to seasons in
   1. Lower and higher altitude regions
   2.. Urban and rural districts

B. Special "vacation lands and waters" in Atlantic Coastal Plain, Piedmont, Ridge and Valley Section, Allegheny Plateau, Erie Lake Plain
   1. State lands: parks, forest parks, forest monuments, forest public camps under the administration of Pennsylvania Department of Forests and Waters
   2. Other areas used primarily as playgrounds

UNIT X—Pennsylvania's Work and Recreational Pattern in Its Relation to Those Patterns of the United States and of the Rest of the World

A. Where else in the United States or the world might workers in each of the major work activities in Pennsylvania find employment? How do the activities in those areas compare with the similar activities in Pennsylvania?

B. Where in the United States and elsewhere in the world would and do Pennsylvania people go to "recreate" or study in regions similar to recreatory regions in Pennsylvania? Where do they visit regions different from those existing in Pennsylvania? Why these differences?

C. How are the work activities and recreational activities of Pennsylvania integrated?

UNIT XI—Population Pattern in Pennsylvania Interpreted Geographically, then Considered in Its Relation to the United States and World Patterns of Populations

A. Distribution and density of population in Pennsylvania as related to the topography, climate, and other factors of the natural environment and to the work pattern of the State
   1. Rural districts
      a. Sparsely populated areas related to gas-petroleum regions, forest lands, recreation, and non-used districts
      b. Partially populated areas related to farming and animal industries
   2. Urban districts
      a. Areas of considerable density of population and related natural and human items
      b. Densely populated urban areas associated with intensive manufacturing and transportation activities which in turn are related to level topography, abundant water resources, unforested land, mineral resources, and other items in the natural environment

B. Pennsylvania's population pattern as a continuation of that in southern New York, western New Jersey, and the northern sections of Delaware, Maryland, West Virginia, and eastern Ohio

C. Pennsylvania's population pattern in relation to the population pattern of the United States and of the world
   1. Rank of Pennsylvania in United States statistics
      a. Total population
      b. Ratio of population to extent of area compared with such ratios in states in
         (1) Middle Atlantic Geographic Division (United States Census)
         (2) Similar mountain-lowland natural environmental complexes in the United States
      c. Number of cities over 100,000 in the United States
   2. Relation of Pennsylvania's pattern of population to world pattern of population
      a. Number of cities of 100,000 or over occurring within the area equal to that of Pennsylvania

b. Combination of workers of so many different activities within such an area

D. Complexity of Pennsylvania's population structure in terms of their origins throughout the world and trends in Pennsylvania's population pattern from 1900-1930

UNIT XII—The Geography of the Local District

How and to what extent can the work and play of the local district be related to elements in the natural environment? (Since communities vary greatly, it is impossible to suggest more detailed problems that would be characteristic of every local district in Pennsylvania. Relationships explaining absence of certain land, water, and air uses are quite as significant as those interpreting the occurrence of present and possible or probable land, water, and air utilizations in the district.)

A. The Local District in Its Regional Natural Pattern
   1. The shape of the district and its street pattern as related to the site of the district
   2. Land and water utilizations or work pattern as related to the site and situation of the district
      a. Classification of outstanding land and water uses as related to elements in the site and situation
         (1) Basic or primary industries
         (2) Transforming industries
         (3) Transportation industries
         (4) Recreational activities
         (5) Other phases of economic life that are in part related to natural environmental elements
      b. Classification of the district as an industrial, commercial, political, recreational, health center in terms of its site and situation
   3. Population pattern of the district as related to the site and situation of the district
      a. Distribution and density of population
      b. Frequency of homes versus industrial and business buildings in the various sections of the district
   4. A clinching of the outstanding facts and conditions of the natural layout of the district
      a. Relief and drainage
      b. Weather and climate
      c. Water resources
      d. Other significant elements of the natural environment

B. The Local District in Its Relation to the County and the State
   1. The nature, origin, and destination of commodities that are exchanged, interpreted geographically
   2. Transportation avenues as related to the natural environment pattern and land and water utilization
   3. Probable and possible future policies and developments between the local district and the county and state

C. The Local District in Its Relation to the United States
   1. Nature, origin, and destination of commodities that are exchanged, interpreted geographically
   2. Transportation contacts as related to the national natural environmental pattern and land and water utilization
   3. Possible and probable future policies and developments

D. The Local District in Its World Relations
   1. Nature and destination of leading commodities shipped to other countries
      a. Re-analysis or recall of commodities shipped and produced at home in relation to items of the local site and the immediate hinterland
      b. Analysis of the countries or regions receiving these goods, in terms of needs there, or social environments of those countries or regions
   2. Nature and origin of leading commodities received from other countries interpreted partly in terms of
      a. Needs of the local district
      b. Natural and cultural environments of the countries sending the commodities
   3. Relative study of variety, quantity, and quality of the leading commodities received from and of the leading commodities sent out to the other countries
   4. Other contacts with international affairs that are significant to the district

E. Summary of the Relations of the Local District to
   1. Other sections of Pennsylvania
   2. Other sections of the United States
   3. Other sections of the world

F. Adjustments developing as results of state, national, and world planning

UNIT XIII—The Geography of the County
Develop this unit similar to that of the local district

V. SPECIAL UNIT WITH SUGGESTIONS (Part of Unit VIII)

The Agricultural Districts in Pennsylvania

See page 13.

Since the pupils will have had considerable experience in the previous years with geographical materials, such as specimens, maps, graphs, statistics, pictures, and word matter, they and the teacher will assemble various kinds of data that they believe will be useful in learning the geography of agricultural regions in Pennsylvania. Many specific references are noted in the bibliography. From agencies and interested individuals other data can be found in the local school community. Equipment for expressing or constructing maps, sketches, graphs, and word analyses should also be available for use by pupils and teachers.

A. Purpose

1. A comprehension of the major understanding to be acquired in the study of this part of the unit
   a. The study of agricultural districts in Pennsylvania should lead to a realization
      (1) That agriculture is a major work activity
      (2) That a variety of crops is widely produced throughout the Commonwealth
      (3) That specialized crops (tobacco, apples, grapes, potatoes, mushrooms), in certain counties, as well as staple farm crops throughout Pennsylvania are grown
      (4) That Pennsylvania ranks high in livestock, especially chickens and dairy cattle
      (5) That this varied agriculture is definitely related to a considerable variety of topographic, climatic, and soil conditions and in part to a diversified population spread over the State, but dense in many places, and engaged in various industries other than agriculture
      (6) That some changes in the use of land for crops and animals are constantly occurring partly because of shifts in agricultural and other industrial conditions in other parts of the United States and elsewhere in the world
2. Understanding of the geographic relationships involved in the agricultural geography of Pennsylvania and in a comparison of its agriculture with that in other parts of the United States and the world
   a. Southwestern agricultural district in the Allegheny Plateau where pasture is abundant and fodder crops, such as hay, silage corn, dairy products and meat animals, fine wool, and truck garden crops are produced as related to
      (1) A growing season of at least four and a half months with more than eighteen inches of precipitation in that period and an average annual precipitation of more than thirty-five inches
      (2) Rolling topography mostly over 1000 feet above sea level
      (3) Predominant yellowish-brown loam soils, in places stony
   b. Northwestern agricultural district, primarily on the Lake Erie Plain and adjacent region of the Allegheny Plateau, with such crops as fruits (especially grapes), vegetables, and poultry and dairy products with associated hay, oats, silage corn, and pasture as related to
      (1) More than five months growing season (the delayed spring and fall seasons make the growing season almost as long as that in southeastern Pennsylvania) with at least eighteen inches of precipitation during

that period and an average annual precipitation of more than forty inches

(2) Level to slightly rolling land surface varying from more than 500 feet elevation to slightly over 1000 feet

(3) Yellow soils, poorly drained subsoils, from shales

c. Southeastern agricultural district chiefly in the Piedmont with dairy and poultry products: hay, winter wheat, corn, oats; truck garden, orchard, and greenhouse products; beef cattle and swine; canning crops, especially sweet corn, string beans, and tomatoes; and specialized crops (tobacco, apples, potatoes, mushrooms) as related to

(1) Growing season of more than five months having at least twenty inches of precipitation in that period and an average annual precipitation of more than forty inches

(2) Rolling topography not higher than 1000 feet above sea level

(3) Large areas of brown loam soils, other sections of reddish loams, and some districts of silt loams

d. Agriculture in the Ridge and Valley Region, which is primarily dairy industry and diversified farming with dairy and poultry products, hay, corn (grain and silage), oats, winter wheat, clover, and timothy seeds, also specialized fruit and vegetable farms near cities as related to natural conditions varying according to the locality

(1) Average annual precipitation more than thirty-five inches and growing seasons ranging between 140 and 170 days

(2) Valleys narrow in some places, wider in other places

(3) Soil conditions varied because of limestone and drainage

e. Agriculture in the southcentral and central portion where in part general farming produces crops, such as hay, grains, and potatoes; and in the northern portion of the Allegheny Plateau where dairy products, grain, potatoes, and honey are produced as related to

(1) Broken topography, with several sections of high elevations up to more than 2200 feet; forest lands and mineral regions; pasture lands; and cool, moist climate with a growing season ranging from 90 to 140 days

f. Trends and readjustments in Pennsylvania farming. Consult Bulletin 305, Types of Farming in Pennsylvania, p. 60, School of Agriculture and Experiment Station, Pennsylvania State College

Consideration of current State and national planning in agricultural patterns and policies is essential. The pupils will be guided in realizing that every such modification, contemplated or executed, should be checked against the items and conditions of the natural environ-

ment and in consideration of results found in experimental regional studies. Speculation is wholesome provided that it recognizes known facts. These current studies will of necessity introduce comparative analyses of Pennsylvania's agricultural geography and that of the United States and of agricultural regions elsewhere in the world producing and consuming similar crops and animals.

B. Suggested Activities

Observe carefully a map of Pennsylvania showing what percentage of the total land area is devoted to agriculture (crop raising and animal raising). It is advisable to use a map that indicates this information on the basis of small political units, as townships. Determine the major agricultural regions. Later on you will, no doubt, learn that some regions are less important because a smaller proportion of the land is used for agriculture, fewer people are engaged in agriculture, smaller quantity of agricultural products is raised, and there is less money value of these crops than is the case in the major agricultural region.

Select one region as the first one to be studied. Which counties stand out prominently? On your desk and wall outline maps fill in the names of those counties.

By consulting maps, statistical tables, and graphs showing facts of acreage and production, discover one by one the leading crops produced and animals raised in this region.

Search all the material that you can find at school, in the school and local library, in your home, and anywhere else in the community for pictures of this agricultural region. Recall the names of the counties included in this region; it may help you in your search. Just what items in each picture show some of the following ideas: crops raised, their cultivation, distribution, and other activities connected with farming? Seek items in the natural landscape of these pictures that help to explain why farming is carried on there.

By consulting appropriate maps and statistical tables, determine which counties lead in the percentage of land devoted to crops. You may do likewise so far as pasture is concerned. Reports from the Pennsylvania and United States Department of Agriculture will be useful.

So far, you have been studying chiefly how the land is used. Now let us see how the quantities or amounts of the major crops raised in this region vary in different places. Consult statistical tables, maps, and word matter, then make a graph showing in rank order the quantities of each major crop produced; perhaps some of you will make another graph showing, by counties, the quantity of each major crop. Perhaps some previous class has made graphs that will be helpful. You, no doubt, will wish to make some graphs and maps that future classes may find useful.

Consult maps showing precipitation or rainfall (both the average annual precipitation and the average precipitation during the growing season) and temperature, especially frost con-

ditions or length of growing season; topography; and soil and water resources. You will thus discover which elements in the natural environment of this region help to explain why these particular crops and animals are raised there. Sometimes also, the distribution of population (map) will help to explain these facts.

You probably will wish to learn about the calendar of work, or the sequence of work activities, that is necessary to produce these crops and animals. Perhaps you will be interested in finding out about the seeds, machinery, and other things needed by the farmer; their sources and why they come from those places; the economic and social conditions on the farmsteads and in the nearby villages; then the problem of transporting these needed articles as well as the products of the farms; and finally, the uses and consumption of the agricultural commodities produced in this region. Here pictures, specimens, word matter, maps (especially those showing the transportation pattern in Pennsylvania and in the United States), are essential if you wish to acquire correct and meaningful ideas. You will be constantly trying to discover how the activities and conditions in this agricultural region are explained partly by the activities and conditions in the natural environment of the region.

No doubt you will make many sketches, maps, graphs, outlines, and brief word analyses, perhaps even models, while you are studying this region. You will constantly check the maps and word matter against each other and give yourself tests to make certain that you are learning accurately.

Now that you have had the experience of understanding the geography of one of the agricultural districts in Pennsylvania and thus have learned to use more effectively some geographic tools or materials, you should be able to learn more easily the geography of the other agricultural regions. Finally, you will come to appreciate to some extent how the agricultural geography of Pennsylvania functions in the life of our Commonwealth.

C. Evidences of Pupil Growth

1. Increased ability to recognize and assemble data that can be constructed into geographic relationships; to apply knowledge of geographic relationships to life situations and problems that concern agriculture in Pennsylvania.
2. Probable additions to and strengthening of vocabulary

air drainage	land uses
animal unit	marketing facilities
calendar of work	plump grain
cash crop	precipitation
crop association	silage
growing season	tame hay
humus	truck or market gardening

3. Locational geography concepts

   Many map concepts should result from this study; a few suggestions are given below. Mastery either in recognition or recall or both levels should be acquired.

a. The agricultural pattern (arrangement of districts) of Pennsylvania
b. The localities where given land uses, crops, and livestock are important
c. Localizations of the given conditions of associated topography, climate, soil, and water resources
d. Occurrence of transportation avenues especially used in agriculture
e. Collecting and distributing centers for the agricultural products and significant consumption areas

4. Specific abilities, habits, and skills strengthened
   a. Skill in comparing maps showing agricultural regions and related items of the natural environment in Pennsylvania, the United States, and the world to discover facts of production, distribution, and consumption
   b. Skill in discovering the existence of and then utilizing such items occurring in actual as well as pictured agricultural regional landscapes (both cultural and natural environmental phases) to solve geographic problems
   c. Ability to read significant facts concerning agricultural practices and policies from graphs and statistical tables and to evolve or discover as a result of such study pertinent geographic problems in Pennsylvania agriculture
   d. Skill in searching word matter for items significant in solving geography problems dealing with agricultural Pennsylvania and then utilizing these items in the solutions
   e. Ability to determine steps leading towards the analysis of such problems
   f. Ability to express in graphic form statistical facts concerning agriculture in Pennsylvania
   g. Skill in the selection and use of pertinent State and federal publications as sources for information
   h. Ability to express accurately, utilizing whichever geographic tools are more advisable, relationships between
      (1) Pennsylvania's production and, so far as data are available, also trade in agricultural commodities
      (2) Elements in the natural environment
   i. The habit of consulting geographic tools for the interpretation of current events dealing with any phase of agriculture in Pennsylvania

5. Desirable feelings, attitudes, and appreciations
   a. Realization that agriculture in Pennsylvania plays a significant part in the life of every child and adult in Pennsylvania. Joy in understanding where and why it is carried on in those places
   b. Feeling of responsibility that land, water, and air resources in our Commonwealth must be used wisely and that such uses should be adjusted according to natural and cultural (human) conditions

c. Appreciation of the interrelations between sections of Pennsylvania, United States, and elsewhere in the world, resulting from the agricultural activities conducted in Pennsylvania and the cultural and natural conditions of other places

d. Attitude of a geography student towards items reported in the newspapers and other publications, and in general towards problems that deal with Pennsylvania agriculture

D. Suggestions for Testing

Since specimens, maps, statistical tables, graphs, pictures, and word matter are used in acquiring ideas, so such tools should be used in testing the pupils' learnings; some of these should be tested on the recognition level; others, on the recall level. Only a few suggestions follow.

1. Recognize specimens of each of the major crops and products of livestock produced in Pennsylvania
2. Build meaningful titles for uncaptioned pictures, or actual landscapes, of farm lands in Pennsylvania
3. State in rank order the leading crops and livestock; localize
   a. Areas where land use for agriculture is high
   b. Areas where major production of each crop and each animal is important
4. Discuss the uses and distribution of these products
5. Show how specific elements of the natural environment are related to agriculture in Pennsylvania
6. State correctly the conditions of topography, precipitation, temperature, growing season, soil, and other related items in the natural layout or landscape
7. Give accurately several references that were useful in this study of the geography of Pennsylvania's agriculture

VI. Bibliography*

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A. Books

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B. BULLETINS

PENNSYLVANIA GOVERNMENT AGENCIES, Harrisburg, Pennsylvania. (Write to various Departments for lists of publications)

Board of Fish Commissioners

BUL. 1 Fish ponds for the land owners.
BUL. 4 A treatise on the fish of Pennsylvania.
BUL. 7 Creation of new fishing waters.
BUL. Biennial report.

Board of Game Commissioners

BUL. 10 Game administration in Pennsylvania.
BUL. 14 State game refuges and public hunting grounds.
BUL. 15 An introduction to the mammals of Pennsylvania.
BUL. Biennial report.

Department of Agriculture

BUL. 433 Grape insects and diseases.
BUL. 454 Direct marketing of farm products in Pennsylvania.
BUL. 461 The fruit and vegetable supply for fifteen cities.
BUL. 473 The Japanese beetle in Pennsylvania.
BUL. 474 Improving quality by grading cannery products.
BUL. 479 Fertilizer report (latest edition).
BUL. 484 Agriculture in Pennsylvania.
BUL. 522 Crop and livestock report (latest edition).
BUL. 524 Feeding stuffs report.
BUL. 551 Agricultural statistics.
BUL. Commercial orchards in Pennsylvania.
BUL. Commercial poultry farms in Pennsylvania.

Department of Forests and Waters

BUL. 2 Pitch pine in Pennsylvania.
BUL. 11 Pennsylvania trees.
BUL. 31 In Penn's woods.
BUL. 33 Common trees and shrubs of Pennsylvania.
BUL. 35 Lessons in forest protection.
BUL. 37 The State forests of Pennsylvania.
BUL. 44 Forest tree nursery practice.
BUL. 46 Beech-birch-maple forest type in Pennsylvania.
BUL. 48 Brush burning in Pennsylvania.
BUL. 50 The deer problem in the forests of Pennsylvania.
BUL. 51 Reforesting Pennsylvania's idle land as a self-liquidating public work.
BUL. 52 The hemlock, the state tree of Pennsylvania.
BUL. Stream flow records of Pennsylvania.
CIR. 28 Plant forest trees on idle acres.
CIR. 34 State forest camp sites.

Department of Highways

Facts motorists should know.

Department of Internal Affairs

BUL. G-1 A syllabus of Pennsylvania geology and mineral resources.
BUL. G-3 Pennsylvania caves.
BUL. G-6 Scenery of Pennsylvania.
BUL. M-1 Oil and gas fields of Pennsylvania. Vol. 1 (out of print, consult libraries).
BUL. M-2 Oil resources in coals and carbonaceous shales of Pennsylvania. (Out of print)

Bul. M-5 Lead and zinc ores of Pennsylvania. (Out of print)
Bul. M-6 Bituminous coal fields of Pennsylvania. Part III, Bituminous coal resources.
Bul. M-18 Undeveloped mineral resources of Pennsylvania.
Progress Reports
20 Pennsylvania iron ores.
97 Mineral resources in Pennsylvania.
103 River coals of Eastern Pennsylvania.
104 Iron ores, present and future.
112 White clays of Pennsylvania.

United States Government Agencies. Washington, D. C. (Write to various Departments for lists of publications)

Department of Agriculture

Bul. 836 Conserving our wild animals and birds.
Bul. 1351 Dairy and poultry statistics.
Cir. 19 Forests and floods.
Misc. Pub. 105 A graphic summary of American agriculture based largely on the Census.
Climatic Summary of the United States
Section 87 Western Pennsylvania
Section 88 Central Pennsylvania
Section 89 Eastern Pennsylvania
Reconnaissance soil surveys (various sections of Pennsylvania).
Report of a survey of transportation of the State Highways of Pennsylvania.

Department of Commerce

Commercial survey of the Philadelphia Marketing Area.
Fifteenth Census of the United States—1930.
Agriculture-Pennsylvania, special bulletins:
Statistics by counties. First Series
Farms, acreage, values, and selected livestock and crops.
Statistics by counties. Second Series
Selected crops and livestock, mortgages, taxes, etc.
Statistics by counties. Third Series
Type of farm, number of farms, farm acreage, and value of farm land and buildings.
Occupation statistics
Population bulletin. Pennsylvania. First Series
Number and distribution of inhabitants.
Census of distribution. Products of manufacturing industries.
Census of manufactures. Statistics for cities, industrial areas by industries.

Other Sources

Booth, Mary J. Material on geography. The author, State Teachers College, Charleston, Illinois.
Chambers of Commerce in various cities.
Pennsylvania State College, State College, Pennsylvania.
Bul. 13 Geography of Johnstown, Pennsylvania, an industrial center.
Bul. 257 Land utilization and farm management in Wyoming County.
Bul. 305 Types of farming in Pennsylvania.
Philadelphia Business Progress Association, Philadelphia.
Regional Planning Federation of Philadelphia Tri-State District, Philadelphia.
Population trends, statement of effects of population trends upon planning in Philadelphia Tri-State District.
Regionally planned groundwork, airways and airports.
Regional planning, the region—past, present, and future.
Time tables, folders, and other advertising material may be secured from various railroads and transportation agencies.

C. Magazine Articles

Batschelet, C. E. A picture of the distribution of population in Pennsylvania. Geographical Review. July 1927, pp. 429-433.
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White, L. Geography's part in the plant cost of iron and steel production at Pittsburgh, Chicago, and Birmingham. Economic Geography. Vol. 5, October 1929, pp. 327-334.
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Williams, F. E. Suburban industrial development of Philadelphia, Delaware County. Bulletin of the Geographical Society of Philadelphia. Vol. 25, 1927, p. 123.
Zierer, C. M. Scranton as an urban community. Geographical Review. Vol. 17, No. 3, July 1927, pp. 415-428.
Zierer, C. M. The status of Scranton's mining industry. Bulletin of the Geographical Society of Philadelphia. 1928, p. 11.

D. Maps

Pennsylvania Department of Forests and Waters

Public use maps of individual State Forests
Recreational map: State parks, State forest parks, monuments, public camps
State forest map

Pennsylvania Department of Highways

Individual county maps
Maps and other printed materials
Wall map—highways by types

Pennsylvania Department of Mines

Map of the bituminous coal regions of Pennsylvania showing inspection districts and location of mines

Pennsylvania Public Service Commission
Maps and other printed material
Steam railway map

United States Department of the Interior
Index map of Pennsylvania

United States Post Office Department
Route maps

An outline map of Pennsylvania, showing the names and boundaries of the county and township political divisions. Superintendent of Documents, Washington, D. C.

APPENDIX I

Visual and Other Sensory Aids for Geography Education

We are rapidly breaking away from traditional teaching. The next decade will see outdoor instruction increasingly used. School journeys, or field trips, bring the child into direct touch with natural phenomena and with all types of geographical situations. The school journey is a valuable medium for learning.

All types of visual aids are absolutely essential to effective learning in geography education. Objects, specimens, models are a valuable asset to the teacher. Children study food, clothing, and shelter intensively. These materials should be in the school museum. Cotton, wool, flax, silk, latex (rubber), and other specimens should be on hand so that children may handle them and experiment with them. It is through seeing, handling, and experimentation that self-activity is developed in the child. There should also be on hand a supply of flat pictures (two dimensions), stereographs (three dimensions), slides, and films in order to bring the world to the schoolroom. Maps, globes, and charts are likewise a necessary part of the geography classroom's equipment.

Every teacher should have access to a still projector and a 16 mm. moving picture machine. Proper preparation requires that teachers should know the minimum amount of standard apparatus necessary and a technique for their use. They should know likewise how to organize and conduct effectively school journeys or field trips. Teachers should not only know how to assemble, care for, and use an object-specimen-model collection, but they should also be familiar with museum procedure.

There are certain standards by which pictorial materials are evaluated. These standards should be the possession of every instructor. Teachers should know how to mount flats, house and care for stereographs, make lantern slides, mend films, and film slides. They should know how to properly house and care for all pictorial materials and be familiar with the proper technique for their effective use.

Photography is playing a large part in geography work. This involves knowing still and motion picture camera techniques. Radio is here and is making a valuable contribution to all types of instruction. It becomes necessary then for teachers to know radio apparatus, programs, and procedures.

Every geography teacher should have the Department visual education bulletins, folders, and the set-up for minimum equipment.

The following is taken from the pamphlet, "Visual and Other Sensory Aids for the Teaching of Geography," prepared by Doctor C. F. Hoban, Director, Pennsylvania State Museum:

I. Apparatus and Equipment:

See Department Projector Sheet

II. School Journey or Field Lesson:

See Department School Journey Bulletin, Vol. I, No. 6

III. Object-Specimen-Model:

A. See the following publications: *Enriched Commercial Teaching,* Woodring-Harold, and *Enriched Science Teaching,* Woodring-Oakes-Brown, Teachers College, Columbia University; *Materials on Geography,* M. Josephine Booth, Teachers College, Charleston, Illinois; *Object-Specimen-Model,* Vol. I, No. 8, Pennsylvania Department of Public Instruction

B. Materials in bulk—coffee, cotton, flax, latex, silk, wool, etc., —may be procured from the Commercial Museum, Philadelphia

IV. Pictorial Materials:

Films—

Amkino Corp., 723 Seventh Avenue, New York City
Bell and Howell, 11 W. 42nd Street, New York City
Bell Telephone Company—(Any Pennsylvania office)
Bray Productions, Inc., 729 Seventh Avenue, New York City
Carter Cinema Company, 551 Fifth Avenue, New York City
Cine Art Productions, 6-8 E. 46th Street, New York City
Corticelli Silk Company, 136 Madison Avenue, New York City
Eastman Teaching Films, Inc., 343 State Street, Rochester, New York
Ford M. P. Laboratories, Detroit, Mich.
Fox Film Company, 420 Madison Avenue, New York City
General Electric Company, Schenectady, New York
Herman Ross Enterprises, 622-30 Ninth Avenue, New York City
Ideal Pictures Corp., 26 E. Eighth Street, Chicago
International Harvester Co., Chicago
Kineto Company, Irvington-on-Hudson, New York
Leggett, J. A., Company, 2 W. 46th Street, New York City
National Cash Register Company, Dayton, Ohio
National Motion Pictures Company, Holliday Building, Indianapolis, Ind.
Pathe, Inc., 35 W. 45th Street, New York City
Pennsylvania Board of Censors, Harrisburg
Picture Service Corp., 71 W. 23rd Street, New York City
Q. R. S.-DeVry Corp., 131 W. 42nd Street, New York City
Ray-Bell Films, 817 University Avenue St. Paul, Minnesota
Rothacker Films, 113 W. Austin Avenue, Chicago, Illinois
United Projector and Film Corp., 228 Franklin Street, Buffalo, New York
United States Bureau of Mines, Pittsburgh, Pa.
United States Departments of Agriculture, Commerce, Interior, and Labor, Washington, D. C.
Western Electric Company, New York City
Westinghouse Electric Company, Pittsburgh
Y. M. C. A., 120 W. 41st Street, New York City
See also the following: "1000 and One," Educational Screen, Chicago; Kodascope Libraries, 33 W. 42nd Street, New York City; Directory of 16 mm. films, Victor Animato-

graph Company, Davenport, Iowa; Pennsylvania Department of Public Instruction Folders of Free Films

FILM-STRIP—

Ideal Pictures Corp., 26 E. Eighth Street, Chicago
McIntosh Stereopticon Company, 549 W. Randolph Street, Chicago
Muir, James C., Company, 10 S. 18th Street, Philadelphia
Society for Visual Education, 327 S. LaSalle Street, Chicago
Spencer Lens Company, Buffalo, New York
Stillfilm Company, 25 Third Avenue, New York City

GLASS SLIDES—

Bescler Lantern Slide Company, 131 E. 23rd Street, New York City
Corticelli Silk Company, 136 Madison Avenue, New York City
Keystone View Company, Meadville, Pa.
Philadelphia Commercial Museum
Pilgrim Photoplay Exchange, 804 S. Wabash Avenue, Chicago
Spencer Lens Company, Buffalo, New York
State Library and Museum, Harrisburg
Victor Animatograph Company, Davenport, Iowa
Williams, Brown and Earle, 918 Chestnut Street, Philadelphia

PICTURES AND POSTERS—

See above mentioned bulletins

STEREOGRAPHS—

Keystone View Company, Meadville, Pa.

V. GRAPHS AND CHARTS:

See previously mentioned publications
See map and globe agencies

VI. MAPS AND GLOBES:

Denoyer-Geppert Company, 5235-57 Ravenswood Avenue, Chicago
Nystrom, A. J., Company, 3333 Elston Avenue, Chicago
Rand McNally Company, 270 Madison Avenue, New York City
Weber Costello Company, Chicago Heights, Illinois

VII. MINIMUM STANDARD EQUIPMENT—

The following outline is the recommendation of the state committee of geography teachers:

A. Elementary Grades—
   1. Blackboard—sufficient space for outlines, projection, etc., and for drawing and sketching before the class
   2. Bulletin Board—for the display of pictorial material, clippings, expression work, etc.
   3. Bulletins—sources of materials (see above list)
   4. Cabinet for filing pictorial materials

5. Globes—Physical-Political, 16 inch; slated, 16 inch
6. Maps—
   Physical-Political (wall size): North America, *World, Europe, South America, Asia, Africa, Pennsylvania
   Climate, rainfall and temperature, (wall size): World (winter and summer), North America (winter, summer)
   Blackboard Outline or Slated (wall size): North America, *World, Europe, Asia, South America, Africa, Australia
   Paper Outline (wall size) for continents that are being studied
   Desk Outline Maps for study and checking purposes
   Stencil Maps for blackboard use
7. Object-Specimen-Model—
   (a) Cased material—a collection such as the Commercial Museum furnishes, amplified by teacher and students
   (b) Loose material—(see III. B.)
8. Pictorial Material—
   Carefully selected collection of geographic prints, photographs, post-cards, cut-outs, slides, stereographs, films
9. Projectors—
   Combination stereopticon with filmascopic attachment; 16 mm. motion picture (dark shades should be provided for the room)
   Sufficient stereoscopes for the study table (6-12)
10. Modeling table

B. Junior High Grades—

1. Blackboard—same as elementary
2. Bulletin Board—same as elementary
3. Bulletins—same as elementary
4. Cabinet—same as elementary
5. Globes—
   16 inch Physical Political (movable meridian preferred)
   16 inch slated
6. Maps—
   Physical-Political (wall size): United States, Pennsylvania, *World, North America, Europe, Urasia, South America, Africa, Australasia
   Blackboard Outline or Slated (wall size): United States, Pennsylvania, *World, North America, Europe, Asia or Urasia, South America, Africa
   Set of comparative World maps (wall size): relief, climate (winter and summer), density of population, vegetation, uses of land, products, transportation and trade avenues
   Set of comparative United States maps (wall size):

* *Not* Mercator but Equal Area Projection.

population density, climatic conditions (winter and summer), land utilization, products, transportation

Paper Outline (wall size): Pennsylvania, United States, *World, and individual continents or sections thereof that are being studied intensively

Desk Outline Maps of World, United States, Pennsylvania, continents and smaller sections of world as needed for study and checking purposes

Special maps for local and state geography

(a) Local—
  (1) Topography of individual districts—United States Geological Survey, Washington, D. C.
  (2) Local maps available in given community

(b) County—
  (1) Individual county road maps—Dept. of Highways, Harrisburg
  (2) County postal route maps—U. S. Post Office Dept., Washington, D. C.

(c) State—
  (1) Forestry and other data maps—Dept. of Forests and Waters, Harrisburg (Mathew Northrup Works, Buffalo, N. Y.)
  (2) Highways—Dept. of Highways, Harrisburg
  (3) Railroads (electric and steam)—Public Service Commission, Harrisburg

Individual desk or pupil school atlases, containing physical, climatic, resources, economic maps of the world and of each continent

7. Objects-Specimens-Models—
   (a) Commercial Museum cabinet collection
   (b) Museum materials, including important minerals, especially those found in local district
   (c) Commercial samples and industrial exhibits which are procured from various sources
   (d) Proper cabinet space
8. Pictorial Material—same as elementary
9. Projectors—same as elementary
10. Slide making set and slated graph chart

APPENDIX II

Geography Tests**

Analytical Scales of Attainment in Geography. Educational Test Bureau, Minneapolis, Minnesota.

Division 2 for years five and six; division 3 for years seven and eight. Three forms. Designed for the analysis of the work of the class and each pupil in the class. Cost: 75c per 25.

Buckingham-Stevenson Geography Tests. Bureau of Educational Measurements and Standards, Kansas State Teachers College, Emporia, Kansas.

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* *Not* Mercator but Equal Area Projection.
** Many of these tests have not been standardized.

For years six to nine. Four unit tests. One form. Designed to measure the pupil's ability to apply geographical principles and knowledge of geographical facts. Cost: 60c per 25 of each unit test.

Courtis Supervisor Tests of Geography. S. A. Courtis, Detroit, Michigan.

For years four to seven. Cost: 35c per specimen set.

Geography Test. Harlow Publishing Co., Oklahoma City, Oklahoma.

For years seven to eight. One form. Cost: 3c each.

Geography Tests. Plymouth Press, Chicago, Illinois.

For elementary years. Cost: 60c per 100.

Gregory-Haggerty Geography Tests. C. A. Gregory Co., Cincinnati, Ohio.

For years four to six. Two forms. Designed to measure knowledge of single geographical facts. Cost: $3.50 per 100.

Gregory-Spencer Geography Tests. C. A. Gregory Co., Cincinnati, Ohio.

For years six to eight. Three forms. A general survey test. Cost: $3.50 per 100.

Hahn-Lackey Geography Scale. Public School Publishing Co., Bloomington, Illinois.

For years four to eight. Designed to measure general achievement. Cost: 20c. Only one copy needed for each teacher.

Industrial Commercial Geography. Harlow Publishing Co., Oklahoma City, Oklahoma.

For high school. Three unit tests. One form. Cost: 75c per 25 of each unit test.

Information-Problems Test in Geography. Public School Publishing Co., Bloomington, Illinois.

For elementary years. Test on United States, two forms; test on South America, two forms; test on Europe, three forms; test on Asia, two forms. Each test is designed to measure the pupil's ability to apply geographical principles to concrete situations and the pupil's knowledge of important geographical facts. Cost: $2.00 per 100 of each test.

Metropolitan Achievement Tests. New York City Edition—Geography. World Book Company, Yonkers, New York.

Part of Intermediate Battery. For years four, five and six. Two forms. Part of Advanced Achievement Battery. For years seven and eight. Two forms. Separate test for years four to eight to be issued later.

Modern School Achievement Tests—Geography. Bureau of Publications, Teachers College, Columbia University, New York City.

Part of General Achievement Battery. For years three to nine. Two forms.

New Stanford Geography Test. World Book Co., Yonkers, New York.

For years four to nine. Three forms now, two more later. General achievement. (Also used as part of general achievement battery. Five forms.) Cost: 80c per 25.

Place Geography Tests. Public School Publishing Co., Bloomington, Illinois.

For elementary years. Cost: 20c for copy to be used by teacher.

Public School Achievement Tests—Geography. Public School Publishing Co., Bloomington, Illinois.

For years four to eight. Four forms. General achievement. (Also used as part of a general achievement battery.) Cost: $1.50 per 100.

Russell-Harr Unit Tests in Geography. Bureau of Educational Measurements and Standards. Kansas State Teachers College, Emporia, Kansas.

For years four to eight. Fifteen unit tests. Two forms. Geographic relationships are emphasized and economic phases of geography receive attention. Regional geography is presented through specific and comparative treatment. Tests are constructed for the different regions of the world. Cost: 20c per 25 of each unit test.

Unit Scale of Attainment—Geography. Educational Test Bureau, Minneapolis, Minnesota.

Part of general achievement battery. Division I for years three and four; Division II for years five and six; Division III for years seven and eight. Three forms.

Wiedefeld-Walther Geography Test. World Book Co., Yonkers, New York.

For years four to eight. Two forms. The questions are grouped so that analysis of pupil's achievement may be made. Cost: $1.15 per 25.

Witham Geography Test of Europe. Southern California School Book Depository, Hollywood, California.

For years six to nine. Two forms. General achievement. Cost: $1.50 per 100.

Witham Geography Test of the United States. Southern California School Book Depository, Hollywood, California.

For years five to eight. Two forms. General achievement. Cost: $1.50 per 100.

Witham Standard Geography Tests. J. L. Hammett Co., Cambridge, Massachusetts.

For years five to twelve. Separate tests on the different geographical regions. Cost: $1.75 per 50.

Witham Tests in World Geography. Southern California School Book Depository, Hollywood, California.

For years five to eight. Two forms. A general achievement test. Cost: $1.50 per 100.

APPENDIX III

Directory of Publishers

Books

The Alaska Weekly, Seattle, Washington.

American. American Book Company, 88 Lexington Avenue, New York.

American Geographical Society. American Geographical Society of New York, Broadway and 156th Street, New York.

Appleton. D. Appleton-Century Company, 35 W. 32nd Street, New York.

Bobbs. Bobbs-Merrill Company, 724 N. Meridian Street, Indianapolis.

Canada Bureau of Statistics, Ottowa, Canada.

CENTURY. D. Appleton-Century Company, 35 W. 32nd Street, New York.
COLUMBIA UNIVERSITY PRESS, Columbia University, New York.
CROWELL. T. Y. Crowell Company, 393 Fourth Avenue, New York.
DIAL. Dial Press, Inc., 152 W. 13th Street, New York.
DUTTON. E. P. Dutton and Company, Inc., 286-302 Fourth Avenue, New York.
FLANAGAN. A. Flanagan Company, 920 N. Franklin Street, Chicago.
FRANKLIN. Franklin Publishing and Supply Company, 1931 Cherry Street, Philadelphia.
GARDEN CITY PUBLISHING COMPANY, Garden City, New York.
GEOGRAPHICAL SOCIETY OF PHILADELPHIA, Philadelphia.
GEORGE PHILIP AND SON, Limited. London, England.
GINN. Ginn and Company, 70 Fifth Avenue, New York.
GROSSET. Grosset and Dunlap, 1140 Broadway, New York.
HARCOURT. Harcourt, Brace and Company, 828 Madison Avenue, New York.
HOLT. Henry Holt and Company, Inc., 1 Park Avenue, New York.
HOUGHTON. Houghton Mifflin Company, 2 Park Street, Boston.
IRWIN. Irwin and Gordon, 11 Grenville Street, Toronto, Canada.
JOHNSON. Johnson Publishing Company, 55 Fifth Avenue, New York.
LIPPINCOTT. J. B. Lippincott Company, 227 E. Washington Square Philadelphia.
LITTLE. Little Brown and Company, 34 Beacon Street, Boston.
MCGRAW. McGraw-Hill Book Company, 330 West 42nd Street, New York.
MACMILLAN. The Macmillan Company, 60 Fifth Avenue, New York.
NATIONAL FOREIGN TRADE COUNCIL, India House, Hanover Square, New York.
OWEN. F. A. Owen Publishing Company, Dansville, New York.
PAGE. L. C. Page and Company, 53 Beacon Street, Boston.
PENN. Penn Publishing Company, 925 Filbert Street, Philadelphia.
PRENTICE-HALL. Prentice-Hall, Inc., 70 Fifth Avenue, New York.
PUBLIC SCHOOL PUBLISHING COMPANY, Bloomington, Illinois
RAND. Rand McNally and Company, 270 Madison Avenue, New York.
REVELL. Fleming H. Revell Company, 158 Fifth Avenue. New York.
RONALD. Ronald Press Company, 15 E. 26th Street, New York.
ROW. Row, Peterson and Company, 131 E. 23rd Street, New York.
SANBORN. Benjamin H. Sanborn and Company, 185 Madison Avenue, New York.
SCRIBNERS. Charles Scribner's Sons, 597 Fifth Avenue, New York.
SILVER. Silver, Burdett and Company, 41 Union Square, New York.
SMITHSONIAN INSTITUTE, Washington, D. C.
SOUTH-WESTERN. South-Western Publishing Company, 100 Fifth Avenue, New York.
STOKES. Frederick A. Stokes, 443-449 Fourth Avenue, New York.
SUPERINTENDENT OF DOCUMENTS, Washington, D. C.
WAGNER. Harr-Wagner Publishing Company, 609 Mission Street, San Francisco.
WILEY. John Wiley and Sons, Inc., 440 Fourth Avenue, New York.
WINSTON. John C. Winston Company, 1006-1016 Arch Street, Philadelphia.
WORLD BOOK. World Book Company, Park Hill, Yonker-on-Hudson, New York.
WORLD-TELEGRAM, New York.

MAGAZINES

BULLETIN OF THE GEOGRAPHICAL SOCIETY OF PHILADELPHIA, The Society, Philadelphia.
BUSINESS WEEK, McGraw-Hill Publishing Company, 330 W. 42nd Street, New York.
ECONOMIC GEOGRAPHY, Clark University, Worcester, Massachusetts.

GAME NEWS, Board of Game Commissioners, Harrisburg, Pennsylvania.
GEOGRAPHIC NEWS BULLETIN, National Geographic Society, Washington, D. C.
GEOGRAPHIC REVIEW, American Geographical Society, Broadway and 156th Street, New York.
HOME GEOGRAPHIC MONTHLY, Home Geographic Society, Worcester, Massachusetts.
JOURNAL OF GEOGRAPHY, A. J. Nystrom and Company, Chicago.
JOURNAL OF THE NATIONAL EDUCATION ASSOCIATION, National Education Association, Washington, D. C.
MINING CONGRESS JOURNAL, 439 Munsey Building, Washington, D. C.
NATIONAL GEOGRAPHIC, National Geographic Society, Washington, D. C.
PENNSYLVANIA ANGLER, Board of Fish Commissioners, Harrisburg, Pennsylvania.
REVIEW OF REVIEWS, 229 Fourth Avenue, New York.
SCIENTIFIC MONTHLY, Science Press, Grand Central Terminal, New York.
WORLD'S WORK, 229 Fourth Avenue, New York. (Now combined with Review of Reviews)

MAPS

A. J. Nystrom and Company, Chicago.
Denoyer-Geppert Company, Chicago.
Pennsylvania Department of Forests and Waters, Harrisburg.
Pennsylvania Department of Highways, Harrisburg.
Pennsylvania Department of Mines, Harrisburg.
Pennsylvania Public Service Commission, Harrisburg.
United States Department of the Interior, Washington, D. C.
United States Post Office Department, Washington, D. C.
Weber Costello Company, Chicago Heights, Illinois.

PICTURES

A. J. Nystrom and Company, Chicago.

Denoyer-Geppert Company, Chicago.

Keystone View Company, Meadville, Pennsylvania.

National Geographic Society, Washington, D. C.

Pennsylvania State Museum, Harrisburg.